WEST VIRGINIA UNIVERSITY

FIFTIETH YEAR

CATALOGUE AND ANNOUNCEMENTS

1916 : : : : : : 1917

MORGANTOWN, WEST VIRGINIA
PUBLISHED BY THE UNIVERSITY

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CALENDAR FOR 1917 AND 1918.

1917

JANUARY

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1918

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UNIVERSITY CALENDAR.

1917

June 12, Tuesday.....Commencement

August 18, Saturday.....Summer School Ends

September 17, Monday.....First Semester Begins

September 17, 18, 19, Monday, Tuesday and Wednesday
Matriculation and Registration of Students

September 20, Thursday.....First Recitations of First Semester

November 23, Friday.....Day of Mid-semester Reports

November 29, Thursday, to December 2, Sunday, inclusive
Thanksgiving Recess

December 3, Monday.....Recitations Resume

December 5, Wednesday
Eighth Anniversary Meeting of the Phi Beta Kappa Society

December 22, Saturday, to January 6, 1918, Sunday, inclusive
Christmas Holiday Recess

1918

January 7, Monday.....Recitations Resume

January 26, Saturday.....Last Recitations of First Semester

January 28, Monday, to noon, February 2, Saturday, inclusive
Final Examinations of First Semester

February 5, Tuesday.....Second Semester Begins

February 5, 6, Tuesday and Wednesday.....Registration of Students

February 7, Thursday.....First Recitations of Second Semester

February 22, Friday, Washington's Birthday.....Holiday

April 5, Friday.....Day of Mid-semester Reports

May 30, Thursday, Memorial Day.....Holiday

June 1, Saturday.....Last Recitations of Second Semester

June 3, Monday, to noon, June 8, Saturday, inclusive
Final Examinations of Second Semester

June 12, Wednesday.....Commencement

West Virginia University

MORGANTOWN

ESTABLISHED FEBRUARY 7, 1867.

THE STATE BOARD OF CONTROL.

403 CAPITOL STREET.

CHARLESTON, WEST VIRGINIA.

JAMES S. LAKIN, PRESIDENT.....Charleston, W. Va.

A. BLISS McCRUM, TREASURER.....Charleston, W. Va.

J. M. WILLIAMSON.....Charleston, W. Va.

The State Board of Control has the direction of the financial and business affairs of the state educational institutions.

THE STATE BOARD OF REGENTS.

STATE CAPITOL BUILDING.

CHARLESTON, WEST VIRGINIA.

M. P. SHAWKEY, PRESIDENT.....Charleston, W. Va.
STATE SUPERINTENDENT OF SCHOOLS

GEORGE S. LAIDLEY.....Charleston, W. Va.

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JOSEPH M. MURPHY.....Parkersburg, W. Va.

The State Board of Regents has charge of all matters of a purely scholastic nature concerning the state educational institutions.

ADMINISTRATIVE OFFICERS.

OF THE UNIVERSITY.

FRANK BUTLER TROTTER, A.M., LL.D., President

ROBERT ALLEN ARMSTRONG, A.M., Litt.D., Chaplain

ALFRED JARRETT HARE, A.M., Secretary and Registrar

SUSAN MAXWELL MOORE, A.B., Dean of Women

DAVID DALE JOHNSON, A.M., Editor of the University Bulletin

WILLIAM JAMES WHITE, Financial Secretary

OF THE COLLEGES AND SCHOOLS.

The College of Arts and Sciences
JAMES MORTON CALLAHAN, Ph.D., Dean

The College of Engineering
CLEMENT ROSS JONES, M.M.E., Dean

The College of Agriculture
JOHN LEE COULTER, Ph.D., Dean and Director of the Agricultural Experiment Station

CALVIN R. TITLOW, Director of Agricultural Extension

The College of Law
HENRY CRAIG JONES, A.B., LL.B., Dean

The School of Medicine
JOHN NATHAN SIMPSON, M.D., Dean

The School of Music
LOUIS BLACK, Director

The Summer School
WAITMAN BARBE, Litt.D., Director

THE COUNCIL OF ADMINISTRATION.

The President of the University and the Deans of the various colleges.

THE UNIVERSITY FACULTY.

The President, Deans of the various colleges, Professors, Associate Professors and Assistant Professors in all divisions of the University, the Dean of Women, the Commandant of Cadets, the Director of the School of Music and the Librarian of the University.

STANDING COMMITTEES.

ENTRANCE: The deans of the three colleges admitting freshmen.

CLASSIFICATION AND GRADES: Professors HARE, J. R. TROTTER, SHEETS, and GRUMBEIN, and Assistant Professor MORRIS (Secretary).

GRADUATE WORK: Dean CALLAHAN, Professors DEAHL, SHELDON, WAGGONER, and DAVIS (Secretary).

PUBLIC EXERCISES: Professors NEIL, TRUSCOTT, and EMORY, Director BLACK (Secretary), and Mr. HERSEY.

PRIZES: Professor VICKERS, Dean H. C. JONES, and Professors NEIL, HODGSON, and CANNADAY.

LIBRARY: Mr. ARNETT, Professors ARMSTRONG, REESE, ALDERMAN, CHURCH, CLARK, BROWN, and EIESLAND.

WOMEN STUDENTS: Dean MOORE, Assistant Professor COLWELL, Miss HORNE, Miss HAYES, and Miss ATKESON.

UNIVERSITY PUBLICATIONS: Associate Professor D. D. JOHNSON, Professors BARBE, CANNADAY, and FORMAN, Associate Professor SIMONTON, and Mr. STOCKDALE.

STUDENT PUBLICATIONS: Professors WHITEHILL, STATHERS, CHITWOOD, MORRIS, and BISHOP, and Associate Professor SMITH.

SUMMER SCHOOL: President TROTTER, Dean CALLAHAN, and Professors BARBE, DEAHL, and WINKLER.

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SORORITIES: Miss Colwell (Alpha Xi Delta), Mrs. HITE (Kappa Kappa Gamma), and Mrs. BARBE (Chi Omega).

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FACULTY MEMBERS: Director STANSBURY (Ex-Officio), Professor ZERN, and Assistant Professor PRICE.

ALUMNI MEMBERS: JOHN GUY PRICHARD, Fairmont, W. Va. (Term expires June 30, 1917), STEPHEN GOODLOE JACKSON, Clarksburg, W. Va. (Term expires June 30, 1918).

STUDENT MEMBERS: WILLIAM DANIEL HIMES (Term expires June 30, 1918). ERNEST EMILE WINTERS, JR. (Term expires June 30, 1917).

STAFF OF INSTRUCTION.

PROFESSORS.

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JAMES SCOTT STEWART, M.S., *Professor of Mathematics, Emeritus*

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ROBERT ALLEN ARMSTRONG, A.M., L.H.D., *Professor of English Language and Literature*

BERT HOLMES HITE, M.S., *Professor of Agricultural Chemistry*

ALFRED JARRETT HARE, A.M., *Professor of Latin Language and Literature*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literature*

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RUSSELL LOVE MORRIS, C.E., *Professor of Railway and Highway Engineering*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany*

JASPER NEWTON DEAHL, PH.D., *Professor of Education*

JAMES MORTON CALLAHAN, PH.D., *Professor of History and Political Science*

JOHN NATHAN SIMPSON, A.B., M.D., *Professor of Physiology*

JOHN HARRINGTON COX, A.M., *Professor of English Philology*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD, PH.D., *Professor of European History*

CHARLES EDMUND NEIL, A.M., *Professor of Public Speaking*

JAMES RUSSELL TROTTER, A.M., LL.B., *Professor of Law*

EDWIN FAYETTE CHURCH, JR., M.S., in M.E., *Professor of Machine Design*

CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

LOUIS BLACK, *Head of the Department of Vocal Music*

MADISON STATHERS, PH.D., *Professor of Romance Languages*

WAITMAN BARBE, A.M., LITT.D., *Professor of English*

ENOCH HOWARD VICKERS, A.M., *Professor of Economics and Sociology*

LLOYD LOWNDES FRIEND, A.M., *Professor of Secondary Education*

CHARLES EDWARD BISHOP, PH.D., *Professor of Greek Language and Literature*

WILLIAM HORACE ALDERMAN, B.S.AGR., *Professor of Horticulture*

EDWARD NATHAN ZERN, B.S.E.M., *Professor of Mining Engineering*

ROLAND PARKER DAVIS, S.B., M.C.E., *Professor of Structural and Hydraulic Engineering*

WILLIAM HENRY SCHULTZ, PH.D., *Professor of Pharmacology and Materia Medica*

AARON ARKIN, PH.D., M.D., *Professor of Pathology and Medical Bacteriology*

JOSEPH ELLIS HODGSON, PH.D., *Professor of Mathematics*

EARL WOODDELL SHEETS, B.S. AGR., M.S., *Professor of Animal Husbandry*

HENRY CRAIG JONES, A.B., LL.B., *Professor of Law*

FRIEND EBENEZER CLARK, B.S., PH.D., *Professor of Chemistry*

*LEONARD MARION PEAIRS, B.S. AGR., M.S., *Professor of Entomology*

FRANCIS LORETTE STRICKLAND, PH.D., D.D., *Professor of Philosophy*

ALEXANDER DENNIS WILLIAMS, *Chief Engineer State Road Bureau and Director of School of Good Roads*

---

*On leave of absence until September 1, 1917.

JAMES HOWARD LAUBACH, *First Lieutenant, Infantry, United States Army, Professor of Military Science and Tactics and Commandant of Cadets*

CHARLES BENTON CANNADAY, A.M., *Professor of Latin*

JOHN BEHNY GRUMBEIN, M.M.E., *Professor of Steam and Experimental Engineering*

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering*

ASSOCIATE PROFESSORS.

SIMEON CONANT SMITH, A.M., *Associate Professor of Rhetoric*

ARLEIGH LEE DARBY, A.M., *Associate Professor of Romance Languages.*

ARTHUR LINCOLN DACY, B.S., *Associate Professor of Horticulture*

DAVID DALE JOHNSON, A.M., *Associate Professor of English*

CHARLES AUGUSTUS LUEDER, D.V.M., *Associate Professor of Veterinary Science*

THOMAS PORTER HARDMAN, M.A., JUR. DR., *Associate Professor of Law*

JAMES WIGGINS SIMONTON, A.B., J.D., *Associate Professor of Law*

DAVID CLYDE HOWARD, A.M., LL.B., *Associate Professor of Law*

RACHEL HARTSHORN COLWELL, B.S., A.M., *Associate Professor of Home Economics*

*ANDREW JACKSON DADISMAN, M.S., *Associate Professor of Rural Economics and Farm Management*

FORREST WILBUR STEMPLE, M.S., *Associate Professor of Agronomy*

†CHARLES HERBERT ROGERS, B.S.(PHARM.), PHAR.M., *Associate Professor of Pharmacy*

ASA GEORGE STEELE, PH.D., LL.D., *Associate Professor of Education*

*On leave of absence until February 1, 1917.
†Resigned, February 1, 1917.

ASSISTANT PROFESSORS.

DENNIS MARTIN WILLIS, A.B., LL.M., *Assistant Professor of Economics*

FREDERICK CURTIS BUTTERFIELD, A.B., *Head of the Piano Department*

SAMUEL JOHN MORRIS, M.D., *Assistant Professor of Anatomy and Histology*

*BENJAMIN WALTER KING, A.B., *Assistant Professor of Economics*

EDGAR LEWIS ANDREWS, B.S. AGR., *Assistant Professor of Poultry Husbandry*

CHARLES SUMNER CROW, A.M., *Assistant Professor of Education*

EUGENE CURTIS AUCHTER, B.S. AGR., *Assistant Professor of Horticulture*

WILLIAM ARMSTRONG PRICE, JR., PH.D., *Assistant Professor of Geology*

SIMEON THOMPSON HART, M.E., *Assistant Professor of Machine Construction and Superintendent of Shops*

LUCIUS MOODY BRISTOL, PH.D., *Assistant Professor of Sociology*

HUBERT HILL, M.S., *Assistant Professor of Chemistry*

LEO CARLIN, A.B., LL.B., *Assistant Professor of Law*

CHARLES HERMAN WINKLER, PH.D., *Assistant Professor of Agricultural Education*

ARTHUR ADAMS HALL, B.S., M.E., *Assistant Professor of Electrical Engineering*

JOHN JONATHAN YOKE, B.S. AGR., *Assistant Professor of Animal Husbandry*

LUTHER FRANCIS SUTTON, B.S. AGR., *Assistant Professor of Horticulture*

JULIUS JAY BOURQUIN, B.S., *Assistant Professor of Mining Extension*

ALEXANDER BELL GRAY, B.S., *Assistant Professor of Mining Extension*

GEORGE EDMONDSON PYLE, *Assistant Professor of Physical Education*

---

*On leave of absence until September 1, 1917.

MARTIN LOXLEY BONAR, M.S., *Bacteriologist in State Hygienic Laboratory*

ALTON ALDRICH COOK, B.S., *Chemist in State Hygienic Laboratory*

INSTRUCTORS.

SUSAN MAXWELL MOORE, A.B., *Instructor in Piano*

GRACE MARTIN SNEE, B.M., *Instructor in Piano and Pipe Organ*

MARGARET WINTON HORNE, *Instructor in Violin*

MARY BERTHA OLIVER, B.S., *Instructor in Home Economics*

RUFUS ASA WEST, *Instructor in Metalworking and Stationary Engineer*

FLORA RAY HAYES, A.B., *Instructor in Theory and History of Music*

ROBERT WALDO FISHER, M.D., *Instructor in Physical Diagnosis*

IRVIN HARDY, M.D., *Instructor in Minor Surgery*

*WILLIAM BECK KEMP, B.S., *Instructor in Agronomy*

RAYMER EGBERT SEAMAN, *Instructor in Woodworking and Foundry Practice*

GEORGE WALTER GROW, B.S.M.E., *Instructor in Drawing and Machine Design*

HENRY DORSEY, B.S. AGR., *Instructor in Agronomy*

HARLEY LUCIUS CRANE, B.S. AGR., *Instructor in Horticulture*

HERMINE WIECKING, *Instructor in Public School Music*

ROBERT CLIFTON SPANGLER, A.M., *Instructor in Botany*

MARGARET BUCHANAN, A.B., *Instructor in Mathematics*

MARY MEEK ATKESON, A.M., *Instructor in English*

EDWARD MACK, JR., PH.D., *Instructor in Chemistry*

JAMES GRANTHAM, A.M., *Instructor in German*

CHARLES MOON, B.S.C.E., *Instructor in Physics*

DONALD MONROE GILBERT, PH.B., *Instructor in Romance Languages*

*Resigned, December 1, 1916.

HUBERT MILO FREEMAN, A.B., *Instructor in Physics*

GEORGE MORRIS OSBORN, B.S.M.E., *Instructor in Sanitary Engineering and Surveying*

*AUBREY JUDSON SWIFT, M.S. in A.H., *Instructor in Animal Husbandry*

DANIEL HENRY PERDUE, *Instructor in Mining Extension*

CALLIE CONGIE NUZUM, B.S., *Instructor in Home Economics*

IVAN VAUGHAN DETWEILER SHUNK, A.M., *Instructor in Botany*

HARRISON RANDALL HUNT, PH.D., *Instructor in Zoology*

CHESTER PENN HIGBY, A.M., *Instructor in History*

LOUISE FERRIS CHEZ, *Director of Women's Gymnasium*

CLARENCE FLOYD WELLS, A.B., *Instructor in Soils*

WILLIAM ALLEN RHEA, M.S. AGR., *Instructor in Dairy Husbandry*

CARL HENRY CATHER, B.S.M.E., *Instructor in Drawing*

ROBERT MILLS SALTER, M.S., *Instructor in Soils*

REBECCA LUELLA POLLOCK, A.M., *Instructor in English*

SAMUEL MORRIS, M.A., *Instructor in Chemistry*

EDGAR BLAINE KING, *Instructor in Mining Extension Work*

GORDON ALGER BERGY, PH.C., M.S., *Instructor in Pharmacy*

THEODORE CLINTON McILVAINE, B.S. AGR., M.S., *Instructor in Agronomy*

ROLAND HARRISON PATCH, M.S., *Instructor in Horticulture*

CHARLES ADAMS REESE, B.S., *Instructor in Entomology*

HARLIN REX COKELEY, *Instructor in Animal Husbandry*

ROBERT GEORGE BROWN, PH.C., B.S., *Instructor in Pharmacy*

ASSISTANTS.

WALTER ALEXANDER MESTREZAT, *Assistant in Music*

MAX CARLETON NELSON, *Assistant in Drawing*

GENEVIEVE ELLIOTT MARSHALL, *Assistant in Voice*

---

*Resigned, January 31, 1917.

STUDENT ASSISTANTS.

DANIEL FRANCIS CRONIN, *Student Assistant in Electrical Construction*

LESTER ELWIN FRAZIER, *Student Assistant in Chemistry*

RUSSELL LAYMAN SATTERFIELD, *Student Assistant in Chemistry*

HOWARD JOHNSON TEMPLETON, *Student Assistant in Chemistry*

BRACE SLOAN KNABENSHUE, *Student Assistant in Chemistry*

JULIAN LAMAR HAGEN, A.B., *Student Assistant in History*

GEORGE SPENCER COOPER, JR., *Student Assistant in Chemistry*

BERNAL ROBINSON WEIMER, A.B., *Student Assistant in Zoology*

BRISON EDWIN KIMBLE, *Student Assistant in Physics*

OTTO WELTON SNARR, *Student Assistant in Zoology*

MERRILL HALL THORN, *Student Assistant in Mathematics*

LEON HOVSEP BOGHOSIAN, *Student Assistant in Electrical Construction*

FRANK McCAIN BREWSTER, *Student Assistant in Forging*

VIRGINIA RUTHE GUSEMAN, *Student Assistant in Home Economics*

ERNEST BLAINE WELLS, *Student Assistant in Soils*

PAUL MINOR HAWKINS, *Student Assistant in Horticulture*

ERNEST EDWARD BISHOP, *Student Assistant in Bacteriology*

ALAN KEYSER CARROLL, *Student Assistant in Dairy Husbandry*

DORSEY BRANNAN, B.S. AGR., *Student Assistant in zoology*

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION STAFF.

JOHN LEE COULTER, A.M., PH.D., *Director*

BERT HOLMES HITE, M.S., *Chemist*

*NAHUM JAMES GIDDINGS, M.S., *Plant Pathologist*

WILLIAM EARL RUMSEY, B.S. AGR., *State Entomologist*

HORACE ATWOOD, M.S. AGR., *Poultryman*

*LEONARD MARION PEAIRS, B.S. AGR., M.S., *Animal Husbandry*

EARL WOODDELL SHEETS, M.S. AGR., *Animal Husbandry*

CHARLES AUGUSTUS LUEDER, D.V.M., *Veterinarian*

WILLIAM HORACE ALDERMAN, B.S. AGR., *Horticulturist*

†LEE IRVING KNIGHT, PH.D., *Plant Physiologist*

ALONZO BEECHER BROOKS, B.S. AGR., *Forester*

ISAAC SCOTT COOK, JR., B.S. AGR., *Consulting Agronomist*

FIRMAN EDWARD BEAR, M.S., *Consulting Soils Chemist*

ARTHUR LINCOLN DACY, B.S., *Associate Horticulturist*

EUGENE CURTIS AUCHTER, B.S. AGR., *Assistant Horticulturist*

LUTHER FRANCIS SUTTON, B.S., B.S. AGR., *Assistant Horticulturist*

‡WILLIAM BECK KEMP, B.S., *Assistant Agronomist*

¶CLEVELAND HENDRICKS SCHERFFIUS, *In Charge of Tobacco Investigations*

EDGAR LEWIS ANDREWS, B.S. AGR., *Assistant Poultryman*

ANTHONY BERG, B.S., *Assistant Plant Pathologist*

CHARLES EDWARD WEAKLEY, JR., *Assistant Chemist*

FRANK BATSON KUNST, A.B., *Assistant Chemist*

JAN HENDRICK BERGHUIS-KRAK, B.S., *Assistant Chemist*

*On leave of absence until September 1, 1917.
†In co-operation with the University of Chicago.
‡Resigned, December 1, 1916.
¶In co-operation with the United States Department of Agriculture.

*ANDREW JACKSON DADISMAN, M.S. AGR., *Assistant in Farm Management*

ROBERT MILLS SALTER, M.S., *Assistant Chemist (Chemistry of Soils)*

JOHN JONATHAN YOKE, B.S., *Assistant in Animal Husbandry*

†AUBREY JUDSON SWIFT, M.S., *Assistant in Animal Husbandry*

CHARLES ELLSWORTH STOCKDALE, B.S. AGR., *Agricultural Editor*

ROSS HOMAN TUCKWILER, B.S. AGR., *Assistant in Animal Husbandry*

GEORGE WILBUR BURKE, B.S., *Assistant Chemist*

CHARLES FAYE SARLE, B.S., *Assistant in Farm Management*

THEODORE CLINTON McILVAINE, B.S. AGR., M.S., *Assistant Agronomist*

ROLAND HARRISON PATCH, M.S., *Assistant Horticulturist*

WILLIAM JAMES WHITE, *Auditor*

AGRICULTURAL EXTENSION DEPARTMENT STAFF.

CALVIN R. TITLOW, *Director*

CHARLES HENRY HARTLEY, A.B., *Assistant to the Director*

*NAT TERRY FRAME, A.B., *State Agent in Charge Farmers' Co-operation Demonstration Work*

*BELTON BONNER EZELL, B.S., *Assistant State Agent*

*HU SWISHER VANDERVORT, B.S. AGR., *Assistant State Agent*

WILLIAM HENRY KENDRICK, B.S., *State Agent in Charge Boys' Clubs*

STUART ALVERTON CODY, *Assistant Poultry Club Agent*

MARIAN MARTHA HEPWORTH, B.S., *Associate Professor of Home Economics Extension Work*

*SADIE RAY GUSEMAN, B.S., *State Agent in Charge Girls' Clubs*

*HARRY WILSON CAVE, M.S., *Instructor in Dairy Husbandry Extension Work*

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*In co-operation with United States Department of Agriculture.
†Resigned, January 31, 1917.

EUGENE ANTHONY TUCKWILER, B.S. AGR., *Instructor in Animal Husbandry Extension Work*

ROBERT BURNS DUSTMAN, B.S. AGR., *Instructor in Agronomy Extension Work*

WITHROW REYNOLDS LEGGE, M.S., *Instructor in Horticulture Extension Work*

LIBRARY STAFF.

LONNA DENNIS ARNETT, PH.D., *Librarian*

MABEL CLARK, A.B., B.L.S., *Assistant Librarian*

JENNIE DELAWDER BOUGHNER, A.B., *Assistant Librarian*

MARY AMANDA HERVEY, *Student Assistant*

FORREST DUNBAR KNAPP, *Student Assistant*

JAMES EDWARD KENNEDY, A.B., *Assistant Law Librarian*

ROBERT EMMETT O'CONNOR, A.B., *Assistant Law Librarian*

EDGAR CURRAN GLASS, *Assistant Law Librarian*

OTHER OFFICERS.

REX BRAMMER HERSEY, A.B., *General Secretary Young Men's Christian Association*

HARRY ADAMS STANSBURY, B.S., *Director of Athletics*

*ROSE MATHEWS SWEENEY, *Assistant to the Dean of Women*

JOSEPH AMI MARTIN, *Superintendent of Grounds and Buildings*

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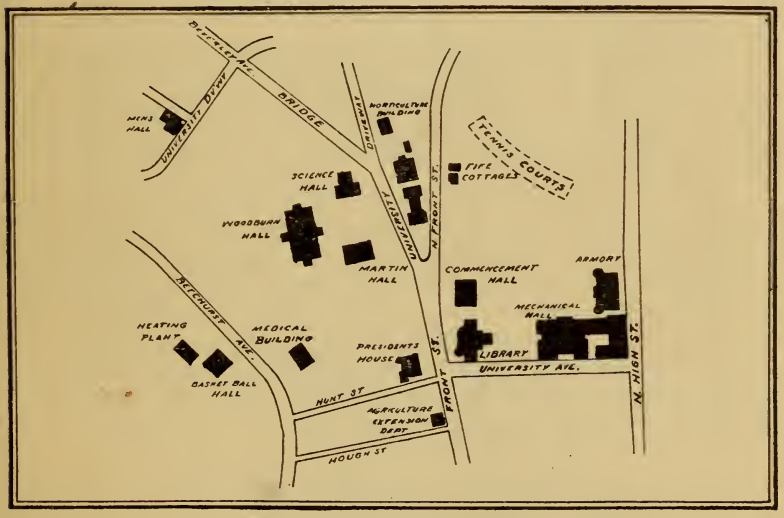
*Resigned, January 31, 1917.

THE UNIVERSITY

DESCRIPTION OF THE INSTITUTION.

LOCATION.

Morgantown, the seat of the University, is the county seat of Monongalia county. It is a beautiful town of twelve thousand inhabitants, located on the Monongahela river and on the Baltimore and Ohio Railroad, the Morgantown and Kingwood Railroad, and the Monongahela Railway, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has modern conveniences of natural gas, water-works, electric lights, street railways, local and long distance telephones, and is noted for its healthful conditions, physical, social, and moral. There are churches of the following denominations in the town: Presbyterian, Methodist Episcopal, Methodist Protestant, Baptist, Protestant Episcopal, Lutheran, Christian and Roman Catholic. There are no saloons.



MAP OF PART OF CAMPUS.

Few institutions of learning have more attractive natural sites. The University grounds border the Monongahela river and afford a most picturesque outlook. The campus comprises about fifty acres. The University farms, a mile distant from the campus, contain in all almost seven hundred acres.

HISTORY.

West Virginia University originated from the national land grant act of July 2, 1862, and from the subsequent action of the state legislature in accepting and carrying out the provisions of the act. On January 9, 1866, the board of trustees of the Monongalia Academy at Morgantown tendered to the legislature for the use of the contemplated state or land grant college, all its property, including Woodburn Female Seminary, estimated at $51,000, on condition that the college should be located at Morgantown. On January 30, 1867, the legislature accepted the property and on February 7, passed an act permanently establishing "The Agricultural College of West Virginia" and authorizing the governor to appoint eleven suitable persons as a board of visitors.

The eleven visitors held the first meeting on April 3, 1867, at which time they appointed Alexander Martin president and established collegiate, scientific and agricultural departments of instruction.

By an act of December 4, 1868, the name of the college was changed to "West Virginia University" and the "board of visitors" to the "board of regents."

The dates of the establishment of the special colleges and schools now comprised in the University are as follows: the college of law, 1878; the college of engineering, 1887; the agricultural experiment station, 1888; the college of agriculture, 1897; the school of music, 1897; the school of medicine, 1902.

The University has had nine regular presidents. Alexander Martin resigned in 1875. He was succeeded by John W. Scott, (acting president), 1875-7; John Rhey Thompson, 1877-81; Daniel Boardman Purinton (acting president), 1881-2; William L. Wilson, 1882-3; Robert C. Berkeley (chairman of the faculty), 1883-5; Eli Marsh Turner, 1885-93; Powell Benton Reynolds (acting president), 1893-5; James L. Goodnight, 1895-7; Jerome Hall Raymond, 1897-01; Daniel Boardman Purinton, 1901-11; Thomas Edward Hodges, 1911-14; Frank Butler Trotter (acting president, 1914-1916), 1916-.

GOVERNMENT AND ORGANIZATION.

The financial and business affairs of the University and of all the other state educational institutions are directed by a state board of control consisting of three members appointed by the governor. This board also exercises a general control over the various public institutions of the state. The academic control of tthe University and also of the other educational institutions of the state, with the exception of the School for the Deaf, Dumb, and Blind, The Boys' Reform School,

and The Girls' Industrial School, is vested in a single board of regents. The board is bi-partisan and consists of the state superintendent of free schools (ex-officio), who is elected by the people, and of four other members who are appointed by the governor.

The internal administration of the University is vested in the President, The Council of Administration, and the University Faculty. All matters of a purely administrative or executive nature are in the hands of the president alone or of the president and council. The faculty is the general legislative body; it fixes the requirements for entrance and graduation and has immediate direction of the general educational policy of the institution. Any proposal to change this policy in any respect must be made in writing at a meeting of the faculty.

The regular meetings of the faculty are at 7:30 p. m. on the first Monday after the opening of each semester, at 7:30 p. m. on the last Friday preceding examinations at the close of the first semester, and at 9 a. m. on the Saturday preceding Commencement day. Special meetings may be called by the president at any time.

Subordinate to the faculty are a number of standing committees, appointed by the president. See page 8.

The University organization embraces:

The College of Arts and Sciences.
The College of Engineering and Mechanic Arts.
The College of Agriculture.
The College of Law.

The following schools and divisions are connected with the University in their management and work, but do not confer degrees:

The School of Music.
The Summer School.
The School of Medicine.
The Division of Military Science and Tactics.
The West Virginia Agricultural Experiment Station.
The Division of Agricultural Extension.

FUNDS.

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $115,750; (2) the Morrill fund; (3) the Hatch fund; (4) the Adams fund; (5) biennial appropriations by the state legislature; (6) fees and tuition. The annual income of the University and Experiment Station from all sources is now approximately $400,000.

BUILDINGS.

The buildings are as follows:

1. Woodburn Hall, a three-story building, containing the administrative offices, lecture rooms, the law library and various laboratories. A portion of the third floor of this building is occupied by the University School of Music.

2. Science Hall, a three-story building, containing lecture rooms and laboratories for the departments of physics and chemistry.

3. Martin Hall, a three-story building, containing recitation rooms and laboratories and the halls of the Columbian and Parthenon literary societies.

4. Commencement Hall, a large two-story building, containing a commodious chapel, with 1,500 seats, and the gymnasium.

5. The Agricultural Building, a two-story building, containing the laboratories and offices of the Agricultural Experiment Station.

6. The Armory and Drill Hall, for the Division of Military Science.

7. Mechanical Hall, occupied by the College of Engineering and Mechanical Arts, the Department of Geology, and the State Road Bureau.

8. The Library, containing the general library and reading and seminar rooms.

10. The President's House.

11. The Central Heating Plant.

12. The Men's Hall, or Dormitory.

13. The Women's Hall and Annex, dormitories for women students.

14. The Fife Building, containing lecture rooms and the botanical, and bacteriological laboratories.

15. The Horticultural Building, containing the offices, recitation rooms and laboratories of the Department of Horticulture.

16. The Office Building of the Agricultural Extension Staff.

17. The Demonstration Cottage, in charge of the Department of Home Economics.

18. The University Greenhouse.

Besides these there are the various buildings on the University Farm.

Plans are now being prepared for an Agricultural Building and a Women's Dormitory.

THE UNIVERSITY LIBRARY.

The Library Building is a three-story stone structure, 135 feet long by 50 feet wide, with book room annex in the rear. The basement of the building is used for storage. On the first, or main floor,

are the reading and reference rooms, the cataloguing rooms and the office of the librarian. On the upper floors are rooms for government documents, for storage, and for class work.

The reading and reference rooms are equipped with modern library appliances and are convenient to the book room in the rear.

The University Library consists of the General and Law Libraries. The General Library is located in the Library Building and numbers about 50,000 volumes. The Law Library, located in Woodburn Hall, numbers about 9,000 volumes. The library of the Agricultural Experiment Station is now shelved with and is a part of the General Library. Two hundred and seventy-five periodicals, including publications of societies, are received. Most of the county papers of the state are on file in the reading room.

All officers and students and, under special restrictions, persons not connected with the University, have the privilege of drawing books from the library for home use, two volumes being allowed at one time. The corps of instruction have direct access to the shelves and students may have this privilege for special investigation upon recommendation of their instructors. The most important reference books, and books used in connection with the courses of instruction, numbering between 4,000 and 5,000, are kept on open shelves in the reference room. A card catalogue, shelf list and other bibliographic aids are provided and the members of the library staff are ready at all times to give assistance in research and investigation.

The Library is open from 7:45 a. m. to 10 p. m. every week day during the semester except Friday when it is closed at 8 p. m. It is closed on Thanksgiving day, Christmas day, New Year's day and the Fourth of July. On Sundays the Library is open for readers from 2 to 5 p. m. No books may be borrowed on Sunday. During the Christmas and summer vacations it is open on week days from 8 to 12 a. m.

PHYSICAL LABORATORIES.

The Department of Physics occupies the basement and first floor of Science Hall. The general lecture room is provided with water, gas, compressed air, electrical power, a special device for rapidly darkening the room, and a solid masonry pier for galvanometers, etc., requiring a non-vibratory support. The two general laboratories are large enough to accommodate forty students working at one time and are equipped with the view of accomplishing the maximum amount of laboratory work in the minimum time. The photometer room is equipped with three individual switchboards connecting with the main power board, a full line of D. C. and A. C. measuring instru-

ments, six mounted galvanometers, a Leeds and Northrup Potentiometer with standard cells and resistances for D. C. calibration, a Siemens Dynamometer for A. C. calibration, Thompson, Ring, and Epstein sets for iron testing, standard capacities, Wheatstone and Cary-Foster Bridges for resistance measurements. The shop is supplied with a full line of bench tools for the manufacture and repair of apparatus, and has in addition a 9-in. lathe, a 9-in. drill press, a circular saw and emery wheels—all driven by a 3-HP motor.

Electrical power is supplied from a motor-generator set, the D. C. voltage being controlled by a Tirrill Regulator insuring steady voltage for laboratory work. It has in addition a 220-volt A. C. supply, and 50 volts from a storage battery. The distributing board is equipped with auto-transformers and special rheostats making it possible to distribute various kinds of power to each laboratory in the department. The department is also equipped with apparatus for advanced work in light and heat.

The laboratory has modern equipment for wireless telegraphy. Wireless time signals are received twice each day from the navy station at Arlington, Virginia.

Under chapter 16, Acts of West Virginia, 1915, the Director of the physical laboratory of the West Virginia University is Assistant Commissioner of Weights and Measures in the State of West Virginia. The Department of Physics is therefore the State Standardizing Laboratory for Weights and Measures and is provided with all the necessary standard weights, measures, balances and apparatus for carrying on this work.

The University Library has on file the current number of most of the standard journals of physics.

CHEMICAL LABORATORIES.

The rooms assigned to the Department of Chemistry consist of one lecture room, two recitation rooms, four large laboratories, and one smaller laboratory. Connected with these are two weighing rooms and two preparation rooms. The laboratories afford working space for one hundred students at a time and are supplied with water, gas, chemicals and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as the more expensive instruments used in analytical work. A collection of the latest reference and text books is kept within easy reach of the students.

In addition to the ordinary apparatus, combustion furnaces, tube furnaces, a colorimeter, specific gravity apparatus, a Berthelot bomb calorimeter, a spectroscope, etc., can be issued to the students from the stock room when their work demands them.

MUSEUM OF GEOLOGY AND PALEONTOLOGY.

The equipment for the purpose of illustrative teaching in geology, paleontology and mineralogy consists of many thousand fossils, casts, and models, a good collection of minerals, specimens of all the important building stones, and Ward's College collection in Paleontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal mining region, within five miles of the western fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities for the study of geology are unsurpassed.

THE ZOOLOGICAL LABORATORY.

The laboratories devoted to the work of zoology and embryology occupy the third floor of the south wing of Woodburn Hall. The plumbing, lighting, etc., of these rooms are arranged for the special purpose for which the rooms are used. The lecture room is supplied with projection lantern, wall charts, etc. The laboratories are equipped with high grade microscopes, microtomes, paraffine bath, incubator, and all the other necessary apparatus for general class work. One room is fitted up as a shop and general preparation room. A part of this room has been partitioned off to form a dark-room. A large reducing and enlarging camera and a Bausch and Lomb microprojection and photographic apparatus make all kinds of photographic work possible. A type collection of animals is located convenient to the lecture room and is gradually being increased. For the work in embryology various series of Ziegler's wax models, embryos, whole and sectioned, dissections, charts, etc., are provided. The bound zoological publications and a few of the most frequently used reference books are kept in the laboratory for convenient reference.

THE BOTANICAL LABORATORIES.

The laboratories for the courses in botany are in the Fife Building. The laboratories are equipped with microscopes, oil-immersion objectives, dissecting lenses, camera lucidas, microtomes, water baths, paraffine ovens, incubators, sterilizers, autoclave, and some apparatus for plant physiology, besides the usual reagents and glassware.

An abundance of plant material can usually be collected in the immediate vicinity of the University. Additional material is grown

in the greenhouse. Many groups of West Virginia plants are exceptionally well represented in Professor Sheldon's private collection. There are also several thousand specimens in the herbarium at the Experiment Station.

There are on file in the Library a number of the current botanical publications and bound volumes, texts, works of reference, monographs, and bulletins on botany and related subjects.

EDUCATION AND EDUCATIONAL PSYCHOLOGY LABORATORY.

The equipment for use in laboratory work in connection with courses in education and educational psychology is found in rooms 16 and 17, Woodburn Hall. The apparatus and materials provide a considerable range for measuring, testing and demonstration, such as the Montessori didactic apparatus, Binet-Simon measuring scale, audiometer, dynamometer, color mixer, form board, Galton whistle, mercury apparatus, tracing and tapping boards, tuning forks, tachistoscope, trial set of lenses for testing the eyes, weighted boxes, etc. The apparatus is of a high grade and well selected for work in education and psychology.

OTHER LABORATORIES.

A more detailed description of the various engineering and agricultural laboratories as well as of the hygienic laboratory of the State Board of Health and of the laboratories of the School of Medicine will be found in connection with the announcements of these departments on later pages of this catalogue.

MILITARY TRAINING.

Military Training is prescribed for all regular students in the University below the rank of junior class unless such students are more than twenty-three years of age upon their entrance to the University. Certain exceptions to this requirement are stated in full in the detailed announcements of the Division of Military Science.

Students who secure appointments as state cadets are exempt from the payment of tuition or matriculation fees and are at no expense for use of text books. Enrollment in the Division of Military Science or appointment as a state cadet does not render the student liable for military service either to the State or to the United States government.

PHYSICAL TRAINING.

Gymnasium.

For the physical training of men students opportunities are offered in the gymnasium under the supervision of an instructor in physical education. It is furnished with an anthropometric equipment, baths, dressing room, lockers, and all kinds of apparatus usually found in gymnasiums. In all the work the aim is to develop health, strength and vitality, and such special exercises are prescribed as may be necessary to symmetrical development.

Physical training for women is provided for in the women's gymnasium in Woodburn Hall. The work is in charge of an instructor in physical education for women.

Athletics.

The department of athletics, as now organized, is under the supervision of a director. Football, baseball, basketball, track and tennis teams are organized and trained each season. All University athletics are under the control of the athletic board. This board is composed of the director of athletics, two other members of the University faculty, two alumni of the University, and two students.

The faculty members of the board are appointed by the President of the University and serve during his pleasure. One member is designated as chairman of the board. He is the executive officer of the board and has no vote except in case of a tie.

The alumni members are elected by the Alumni Association at their annual meeting at commencement for a term not exceeding two years. Not more than one alumni member shall be a resident of Monongalia County.

The student members of the board are elected by the student body by ballot. One member in full standing in the junior class, a candidate for a degree, is elected to serve two years at a poll held not later than June 1st. of each year. All details of these elections are in the hands of the Inter-class Council in consultation with the President of the University.

Athletic Eligibility.

All questions as to the eligibility of candidates for University athletic teams are decided by the University faculty. The University is a member of the National Collegiate Athletic Association.

The following rules, which became effective January 6th., 1916, govern eligibility to participate in intercollegiate athletic contests at West Virginia University:

1. No student shall represent this University in any athletic contest who, while a candidate for a bachelor's degree, has participated in intercollegiate contests during four previous years.

2. No student who, while a candidate for a bachelor's degree, has participated in any department of intercollegiate athletics for any other college or university shall represent this University during the following year.

3. No student who is not regularly registered and a candidate for a bachelor's degree and is not taking at least the regularly required minimum amount of work in the college in which he is enrolled, shall be eligible to participate in any branch of intercollegiate athletics.

4. No student who enrolls later than two weeks after the opening of the semester shall be eligible to participate in any branch of intercollegiate athletics during that semester.

5. Students who play "Summer Baseball" before June 15 or after September 15 during any year or play at any time under the government of the National Baseball Agreement, shall be debarred from competition in any branch of sport.

MEDICAL SERVICE.

All men students in the University pay a medical fee of $2.00 each per semester, in return for which they receive free service from the department of Pharmacy of the University, and free medical attention including minor surgery (specialties excepted) from the faculty of the School of Medicine.

Students wishing to avail themselves of the dispensary will report at the dean's office in the Medical Building, where a physician will be on duty from 9 to 12 a. m., and from 2 to 4 p. m., daily, and Saturday morning from 10 to 12. It is expected that students shall obtain these services at the dispensary, unless they are unable to leave their rooms, when a physician will attend them at their residences. Students unable to leave their rooms can obtain such services by telephoning to the Medical Building (Bell No. 444) during office hours, or to the dean at his home (Bell No. 244-J).

Summer School students and those coming in for only one class, or some special class, are exempted from the payment of the medical fee if they so desire.

UNIVERSITY FEES AND EXPENSES.

GENERAL FEES.

In the College of Arts and Sciences, the College of Engineering and in the College of Agriculture, tuition is free to West Virginia students. For students not residents* of West Virginia the tuition fees are $30.00 for the semester, or $50.00 for the year if paid in advance.

In the College of Law and the School of Medicine the tuition fees are $15.00 a semester, or $25.00 a year, for resident students, and $30.00 a semester, or $50.00 a year if paid in advance, for non-resident students.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in music.

The contingent fee is $3.00 a semester, payable by all students except cadets and those whose work is exclusively in music.

The athletic fee is $2.50 a semester, payable by all students except those whose work is exclusively in music.

The medical fee is $2.00 a semester, payable by all male students.

A fee of $2.00 each semester is charged for registration and the issuance of class cards. This fee is remitted to all students who procure class cards during the first three days of the first semester, and the first two days of the second semester. It is exacted in all other cases. Students whose work is exclusively in music are excused from payment of the $2.00 registration fee.

Class officers will issue class cards only on presentation of the receipt for the above fees, signed by the registrar and financial secretary.

SPECIAL FEES.

The diploma fee is $5.00, payable by all students at the beginning of the semester in which they expect to receive their degree or diploma.

A fee of $1.00 is charged for furnishing a copy of a student's record in the registrar's office after the regular semester reports have been issued.

Students in laboratory courses pay special fees to cover the cost of materials used. The amount of the fee is stated in the announcement of the course.

Each cadet upon entering the corps must pay $17.50 for a uniform.

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*"No student shall gain residence entitling him to reduction or exemption from tuition merely by his attendance at the University."—Order of the Board of Regents.

REFUNDING OF TUITION AND FEES.

Students who withdraw from the University for good and sufficient reasons during the first two weeks of the semester, will have their tuition refunded upon making application to the registrar, but matriculation, contingent, athletic and registration fees will not be refunded.

Students who have paid tuition for the year and who for any reason cannot attend during the second semester, may have the excess paid above the amount of one semester's tuition refunded, upon application.

Students who receive appointment as state cadets after the payment of tuition and fees, but before the first nine weeks of the semester have elapsed, may have refunded to them all tuition and fees not properly chargeable to state cadets.

COST OF A YEAR'S WORK.

Board and lodging may be obtained in Morgantown for from $4.00 to $5.00 a week. Furnished rooms may be obtained at from $1.00 to $1.50 a week with two in a room. Board in private families or in students' boarding clubs costs from $3.75 to $5.00 a week. A student's washing will cost usually from $10.00 to $18.00 a year, his textbooks from $8.00 to $30.00 a year, and his contingent and athletic fees from $6.00 to $11.00 a year. To these fixed charges must also be added matriculation, tuition, diploma, and laboratory fees, in the case of students who are required to pay them. Travelling expenses, clothing, and miscellaneous expenses will depend largely upon the tastes and habits of the individual. In general it may be said that the legitimate cost of a nine months' term of residence at the University ranges from $250.00 to $350.00, exclusive of travelling expenses.

ADMISSION TO THE UNIVERSITY.

METHODS OF ADMISSION.

Students are admitted to the University either by examination or on certificate from an accredited preparatory school. In the latter case the certificate must set forth the work of the student in detail. Diplomas or certificates of a general nature will not be accepted.

Candidates for admission to the University must present certificates of good moral character and, if from other colleges or universities, must present letters of honorable dismissal.

Candidates for admission who do not present entrance certificates, or who come from other institutions of learning without letters of honorable dismissal, may, at the discretion of the registrar, be allowed to register provisionally. In every such case the registrar will make immediate inquiry of the institution from which the applicant comes and if satisfactory certificates of credits and good standing can not be obtained the registration will be cancelled and the fees paid by the applicant will be returned. A provisional registration will not ordinarily be continued for a longer period than one month.

ENTRANCE CREDITS.

The requirements for admission to the various colleges of the University are stated in terms of units.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of thirty-six weeks, with five recitation periods of forty-five minutes each, per week. In courses where laboratory work is required, from two to three hours of laboratory work is considered the equivalent of one hour recitation, according to the amount of outside preparation required in connection with such work.

Certificates of entrance credits must be on the blank form prescribed by the committee on classification and grades, or on a similar form, so that credit values, in units, may be readily computed. These certificates should be sent in to the registrar at least two weeks before the applicant presents himself for matriculation. Failure to do this may result in vexatious delay in registration. After the certificate has been considered by the committee on entrance and the credits recorded, it is permanently filed in the registrar's office and becomes the property of the University.

SPECIAL STUDENTS.

Persons who do not desire to become candidates for a degree, may, by permission of the committee on entrance and of the faculty or dean of the college which they wish to enter, be admitted as special students, subject to the following provisions:

1. Special students must as a rule be twenty-one years of age or over (twenty-two in the College of Law).

2. Special students must satisfy at least nine units of the requirements for admission, including two units of English. (For academic requirements for admission as special students in the College of Law see the announcements of that college in another part of this catalogue.

3. Every application for admission as a special student must be in writing, and must set forth fully the applicant's reason, together with a detailed statement of the studies he desires to pursue.

4. Special students are subjected in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

5. Special students shall not have their work certified for credit to any other institution, but a general statement of work done may be given if applied for; in every case this statement shall show that the work was done under registration as a special student, and in case the full requirements for admission to the University have not been satisfied, the statement shall set forth the fact.

CONDITIONAL ADMISSION.

Persons who lack not more than two units of the regular entrance requirements of any college in the University may register as conditioned freshmen or first year men in that college.

ADVANCED STANDING.

Applications for advanced standing on account of work of college grade done before entrance to the University should be made to the registrar not later than two weeks after the applicant's matriculation. Certificates of college credits must be presented on a separate form from the entrance credits.

If no certificates are offered or if those offered are considered by the committee on entrance to be irregular or insufficient, the com-

mittee will confer with the heads of the departments concerned and if necessary arrange for an examination of the applicant. In this case the dean of the proper college will issue an examination card on which after examination the head of each department will report to the committee on entrance the numbers, names, and credit values of the courses, if any, for which the applicant is entitled to credit.

When the amount of advanced credit has been approved by the committee on entrance the certificates and examination cards are filed by the registrar.

REGISTRATION.

Every student who registers at West Virginia University must fill out a student's registration blank at the office of the registrar in Woodburn Hall or at the office of the dean of the college he desires to enter. Cadets should present themselves to the Commandant in the Armory before coming to the registrar's office. The blanks of women students must be filled out in the Ladies' Parlor and approved by the Dean of Women.

This registration blank is then presented to the registrar who will issue in return a card stating the amount of fees to be paid, the college which the student is to enter, and the name of the class officer or adviser.

The fees as indicated on this card must then be paid to the financial secretary at his office in 2 Martin Hall. His receipt is stamped on the card.

The receipted card is then presented to the class officer designated, who will take it up, assign the student to his proper classes, prepare a study list and issue class cards admitting to these classes.

These class cards are then taken to the proper instructors who will take them up, sign the study list, and enroll the student in their classes. Cadets should obtain from the commandant in the Armory a blank requisition for text books, which blank is to be filled out by the various instructors and then presented at the bookstore in 15 Woodburn Hall.

Finally the study list, properly signed by all instructors must be returned to the class officer who will then issue to the student a membership card, the possession of which entitles him to the use of the library, athletic privileges, and other rights and privileges as a University student. Registration is not completed until this card has been obtained.

All students are required to register at the beginning of each semester.

CLASSIFICATION AND SCHOLARSHIP.

THE CLASS OFFICER.

The duties of the class officer are as follows:

1. To assign the student to proper courses, and see that prescribed work is taken in order.

2. To supervise the selection of elective courses by the student.

3. To keep a record of the work done by the student and to recommend him for his degree or diploma when the work is completed.

4. To have general oversight of the student's college life. The students will look to his class officer for advice and guidance in all matters pertaining to his work. Withdrawal from classes, changing from one class to another, etc., will always require the class officer's consent.

CREDITS.

A credit or semester-hour represents the amount of work done in one semester (eighteen weeks), in one recitation hour with two preparation hours a week. From two to three hours of laboratory work is considered equivalent to an hour of recitation, according to the amount of outside work assigned in connection with the laboratory hours.

Fewer than ten hours in an ancient or modern language will not be counted toward any University degree, diploma, or certificate.

CLASSIFICATION.

No student shall be classified as a freshman or first year student who is conditioned in more than two units of entrance requirements.

The number of courses required for classification as a sophomore or second year, junior or third year, and senior or fourth year student varies in the different colleges. (See announcements of the colleges in subsequent pages.)

First-year students in the School of Medicine, who have completed two years of academic work, have the rank of juniors.

First-year students in the College of Law, who have completed one year of academic work, have the rank of sophomores.

Classification of students for publication in the catalogue will be made on the basis of the work to their credit on November 1st of each year, except in the case of students entering later in the year.

MAXIMUM AND MINIMUM WORK.

A maximum and minimum number of hours for which a student may register in any one semester is established for each college. A student desiring to do irregular work, more or less than the prescribed number of hours in any college, must obtain permission from the committee on students' courses and hours in that college.

Registration for more than the specified maximum work shall be permitted only for the removal of conditions or better adjustment of schedules and not in any case for the purpose of shortening the time regularly required for the work of the degree sought by the student.

SUBSTITUTION FOR REQUIRED COURSES.

A student who desires to substitute another course in place of any course prescribed in his curriculum or required for the degree toward which he is working, must obtain permission for such substitution from the committee on students' courses and hours in his college, but there can be no substitution from group to group.

CHANGES IN REGISTRATION.

The permission of both class officer and instructor shall in all cases be necessary for the withdrawal of a student from any class or for his transfer from one class to another. After the first six weeks of the semester have elapsed the permission of the committee on students' courses and hours in the college concerned must also be obtained. If a student discontinues a course without permission his standing in that course is reported to the registrar as zero.

A change from one major subject to another in the same college will require the consent of the committee on students' courses and hours in that college.

Students may be transferred from one college to another with the approval of the deans of the respective colleges, but in all cases such students must meet the requirements of the curriculum of the college entered.

No permission to do irregular work more or less than the prescribed number of hours, to make substitutions for required work, or to make any change of registration as above stated is valid until such permit has been reported to the committee on classification and grades for approval and record.

WITHDRAWAL FROM THE UNIVERSITY.

A student desiring to withdraw from the University must apply to the president for permission. When the withdrawal permit has been secured it must be presented by the student to his class officer, who will forward it to the registrar. Students who withdraw from the University without permission will have their grades reported as zero at the end of semester and will then be liable to indefinite suspension.

ABSENCES.

Students are required to be present at every recitation and examination of the courses for which they are registered. Punctuality, regular attendance, and attention to the work of the class room will be largely considered in determining the class grade of the student.

Students who find it necessary to be absent from Morgantown while the University is in session must secure permission in advance from the President.

Cadets who wish a leave of absence from duty or who desire to withdraw from the University temporarily during their term of enlistment must apply to the Commandant for a furlough.

At the close of each day all absences are reported by the instructors to the registrar. Special absence report cards are used for this purpose. All excuses for absence should be made to the registrar within five days after the absence occurs. Women students, before going to the registrar, should first present their excuses to the Dean of Women. In cases of illness a certificate from the University Dispensary physician or other practicing physician of the city is required. Every unexcused absence effects a reduction of one per cent. in the student's final grade for the course.

In case of absences at the beginning of either semester a deduction of two per cent. from the final grade in every subject is made for each exercise missed, for all absences not more than seven in number, unless such absences are excused by the committee on classification and grades. If the absences are more than seven in number, full credit for the course is not given, unless such absences are excused by the committee and the work missed made up to the satisfaction of the instructor. Excuses for such absences must be presented to the committee on special blanks furnished for that purpose.

EXAMINATION AND GRADES.

Method of Grading. In practically all the courses offered in the University the student receives both a preliminary or mid-semester grade and a final grade. According to the system of grading employed 100% is regarded as a perfect grade and 70% as a passing grade. The mid-semester standing of the student is based on the daily recitation grades and on a special test given during one or more regular recitation periods. Mid-semester grades are not entered on the registrar's record. The final grade is based on the class standing for the entire semester and on a written final examination to which a special period of two or three hours is devoted. The last week in each semester is given up to these final examinations.

Absence from Examination. If the student attends the course throughout the semester and is absent from examination without permission, the instructor shall count the examination as zero, and report the final grade as one-half the recitation grade. If the student is absent from examination for reasons satisfactory to the instructor and has a recitation grade of eighty-five or over, the instructor may report the recitation grade as the final grade in the subject. If the recitation grade is under eighty-five, and the absence is for satisfactory reasons, the fact will be recorded on the card returned to the class officer, and the student may on application to the registrar obtain permission to take the examination at a later time.

Reports. Instructors must report all grades to the proper class officers on the class cards presented by the students at their entrance to the course. Mid-semester grades must be reported on or before the "Day for Mid-semester Reports" as announced in the calendar. Final grades for the students in each course must be reported within two days after the close of the final examination in that course. In no case should instructors report a grade as "incomplete" or hold it over to a later time. Each class card except in cases of absence from examination as provided above, must bear a definite percentage grade. The class officers will enter these grades on their reports and present the latter to the registrar not later than the Monday following the close of the mid-semester or final examination period.

Conditions and Failures. If the final grade of any student for any course is below sixty, it shall be recorded as a "failure," and the student must take the course again if he desires credit for it. If the final grade is sixty, or over, but below seventy, it shall be recorded as a "condition," and the student shall have the privilege of a second

examination. Request for such a second examination must be made to the instructor not later than ten days after the opening of the succeeding semester and the examination must be taken at the time designated by him. A condition not removed within the semester following the one in which it was imposed becomes a failure. If the final grade after a second examination is again below seventy, it shall be recorded as a "failure."

Reports to Parents. A report of each student's work is made at the close of each semester, either to the student himself or to his parent or guardian. A complete record is also kept in the registrar's office. The fee for making a copy of this record after the semester reports have been sent out is one dollar.

In cases where a student's work is unsatisfactory as shown by the mid-semester test, a mid-semester report will also be made both to the parent or guardian and to the student.

SUSPENSIONS.

Any student whose standing in courses amounting to eight or more semester hours is less than sixty per cent. or who fails to make an average standing of sixty per cent. in all of his courses for any semester is suspended from the University for the succeeding semester. If, however, the failure as above is due to the abandonment of any class, or withdrawal from the University without permission, or to absence from examination without reasonable excuse, the suspension becomes indefinite. If a student suspended for any semester by the operation of this rule re-enters the University and again becomes subject to it, his suspension becomes indefinite.

Any student whose average standing in all studies as shown by the preliminary or mid-semester report is less than fifty per cent. will be suspended from the University for the remainder of the semester.

WORK DONE OUT OF RESIDENCE.

The doing of work out of residence is discouraged. In case of courses begun at the University and not completed by reason of illness or otherwise, however, permission to complete the work in absentia under the direction of the regular University instructors may be granted by the committee on classification and grades; but in such cases credit shall be given only upon report of a grade of not less than eighty per cent. on final examination.

DEGREES.

All University degrees are conferred by the State Board of Regents upon recommendation of the University faculty. Degrees are granted only once in each year, at the annual University commencement.

The names of all students who are to appear as candidates for degrees in any year must be presented by their respective class officers to the committee on classification and grades not later than the beginning of the second semester. All students who intend to present themselves as candidates for degrees in any year should therefore give notice of their intention to their respective class officers not later than January 1.

BACCALAUREATE DEGREES.

The University confers the following baccalaureate degrees: Bachelor of Arts (A.B.), Bachelor of Science (B.S.), Bachelor of Science in Mechanical Engineering (B.S.M.E.), Bachelor of Science in Chemical Engineering (B.S.Chem.E.), Bachelor of Science in Civil Engineering (B.S.C.E.), Bachelor of Science in Electrical Engineering (B.S.E.E.), Bachelor of Science in Engineering of Mines (B.S.E.M.), Bachelor of Science in Agriculture (B.S.Agr.), Bachelor of Science in Home Economics (B.S.H.E.), and Bachelor of Law (LL.B.).

No bachelor's degree will be conferred upon a candidate who has not done at least the last thirty hours of his work in actual attendance at the University. The special requirements and conditions under which a student is admitted to candidacy for a bachelor's degree in each college are stated in the announcements of that college.

GRADUATE DEGREES.

The University does not confer the degree, Doctor of Philosophy, but will certify to other institutions such graduate work as may be applicable toward this degree.

The University confers the following master's degrees: Master of Arts (A.M.), Master of Science (M.S.), Master of Science in Mechanical Engineering (M.S.M.E.), Master of Science in Civil Engineering (M.S.C.E.), Master of Science in Electrical Engineering (M.S.E.E.), Master of Science in Engineering of Mines (M.S.E.M.), and Master of Science in Agriculture (M.S.Agr.). A master's degree is conferred upon the following conditions:

Candidacy.

1. A candidate for a master's degree must hold a bachelor's degree from West Virginia University or from another institution in which the requirements are substantially equivalent. He must have completed all the essential requirements for the bachelor's degree corresponding to the master's degree for which he applies.

2. The applicant must also inform the committee on graduate work of his choice of a major subject and submit a general outline of his proposed course of study. The subject chosen must be either the same as the undergraduate major or one in which the candidate has an equivalent undergraduate preparation. (See page 69.)

Those who wish to become candidates but lack undergraduate preparation will be admitted to graduate study, but must at once make up their deficiencies by taking the necessary undergraduate courses. On completion of such undergraduate courses they become eligible to candidacy.

Those who have received their bachelor's degree and wish to broaden their education without reference to a higher degree, will be admitted to graduate study without restriction as to courses.

Seniors in the colleges of West Virginia University who have completed the work for the bachelor's degree but who have not yet received the degree, may have work credited toward the master's degree at the discretion of the committee on graduate work.

NOTE—Students desiring to be admitted as candidates for a master's degree are advised to make application either in person or by letter to the chairman of the committee on graduate work some week prior to the opening of the semester in which they wish to begin their work. Blank forms can be obtained on application.

The Special Sub-Committee.

If the student is accepted as a candidate for the master's degree the committee on graduate work will appoint a special sub-committee of three professors, including the professors in charge of the work in the candidate's major and related subjects, whose duties shall be: (a) to arrange a specific course of study; (b) to act as advisors; (c) to examine and pass upon the thesis should one be required; and (d) to conduct the final oral examination.

Requirements for the Degree.

1. **Term of Residence.** A candidate must pursue studies in residence at the University for at least two regular semesters or for one regular semester and two summer sessions of nine weeks each.

2. **Course of Study.** The candidate must present thirty-two hours of graduate work, which at the discretion of the department in which he has chosen his major subject may or may not include a thesis. At least ten hours shall be in the candidate's major subject and any remaining hours in subjects related to the major subject. Courses primarily designed for graduate students and distinctly senior courses open to graduates, are indicated in the catalogue but other advanced courses and special research courses not listed in the catalogue may be credited with the approval of the committee on graduate work. In some instances advanced undergraduate courses, not regularly open to graduates, may be approved for graduate work with reduced credit; but elementary courses are never credited.

No work done before the completion of the work required for the bachelor's degree will be credited toward the master's degree unless the work has been regularly approved by the committee.

The specific course of study must be presented to the committee on graduate work for its approval within two weeks after the acceptance of the student's application.

NOTE—Since the principal aim of graduate study is the development of the knowledge necessary to do independent work and the promotion of the spirit of research, each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work and to pursue a course of related reading and study in addition to his University work.

3. **Thesis.** A statement of the general subject of the thesis, with the written approval of the chairman of the special committee, must be furnished to the committee on graduate work within six weeks after the acceptance of the student's application. The thesis shall show acceptable investigation in the major subject. It shall be prepared under the direction of the department in which the student has chosen his major and shall be submitted for approval to the special committee at least four weeks previous to the commencement day at which the degree is expected. The thesis shall be presented in such form as may be prescribed by the committee on graduate work. If the thesis is approved, two typewritten or printed bound copies shall be deposited in the University Library at least one week before the degree is conferred.

4. **Final Examination.** The final examination of the candidates shall be oral and shall cover the major and related courses and thesis, or such part thereof as the special committee may deem desirable. This examination shall be open to the public and shall be held at least three weeks before the commencement day on which the degree is expected. The committee on graduate work shall delegate one of its members to attend the examination.

The special committee shall report their opinion of the thesis and the result of the examination of the candidate to the committee on graduate work at least ten days before commencement.

NOTE—For announcement concerning professional degrees in the College of Engineering, see page 165.

GENERAL INFORMATION.

DISCIPLINE.

The rules and regulations which students are required to observe are few, simple and reasonable: civil and orderly conduct; punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed, and abstinence from drinking, gambling and like gross vices.

Students who do not comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the President of the University in consultation with the dean of the college or head of the division of the University in which the student concerned is enrolled.

The law of West Virginia makes the smoking or other use of cigarettes in school buildings or on land used for school purposes a misdemeanor, punishable by fine of from one to five dollars. By order of the University faculty the use of tobacco in any form by the students of the University in any of the University buildings, or at the entrances thereto is prohibited.

THE CONVOCATION.

The University Convocation is held weekly on Wednesday morning at ten o'clock in Commencement Hall. No classes or other University exercises are held at this hour and opportunity is afforded for all members of the University, both instructors and students, to attend the weekly meeting. The hour is occupied by lectures and addresses, discussion of student interests and problems, and the consideration of questions relating to the general University welfare.

In connection with the weekly convocation brief devotional exercises are usually held under the direction of the Chaplain of the University. The singing at these exercises is in charge of the Director of the School of Music. Attendance is entirely voluntary.

CHRISTIAN ASSOCIATIONS.

The Young Men's Christian Association is a voluntary association of college men for the purpose of promoting and directing widely varied student activities from a religious motive.

Membership is open to all men of the University. The annual

membership fee is $1.00. More than 600 members were enrolled in 1916-17.

The administrative policy is directed by the student cabinet, and by the faculty advisory board. A secretary is employed to assist in directing the work. The office and reading room is in Woodburn Hall.

Weekly devotional meetings are held each Friday evening at 7:00 p. m. in Recital Hall. Other features of the work are the Bible Study courses which enroll a large number of men; the Employment Agency; Boarding and Rooming House Directory; the publication of the University Directory and Handbook. All correspondence should be directed to the General Secretary, Mr. Rex B. Hersey.

Membership in the Young Women's Christian Association is open to all young women in the University. Regular devotional meetings are held every Sunday afternoon at 4:30 in the Women's Parlor in Woodburn Hall.

PHI BETA KAPPA.

The Alpha of West Virginia Chapter of the Phi Beta Kappa Society is established at the University. Stated meetings or public exercises of the Society are held twice annually; the Anniversary meeting on December 5, and the Annual meeting during Commencement Week. The honor of membership may be conferred upon candidates for the degree of Bachelor of Arts who have maintained a high scholarship rank during their college course; also upon members of the faculty and alumni of the University, and upon distinguished citizens of the state. The president of the chapter for the year 1916 is Professor R. A. Armstrong; the secretary, Professor F. W. Truscott.

STUDENT ORGANIZATIONS.

There are in the University various societies and clubs, devoted chiefly to the educational, social and athletic interests of the students. Several Greek letter fraternities and sororities have established chapters at the University and most of these occupy their own chapter houses.

Some of the more important of the student organizations are:

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The University Dramatic Club. The purpose of this organiza-

tion is to stimulate an interest in literary and dramatic work in the University. This is accomplished through the practical and systematic study of standard plays, and through the public presentation of at least one play in each college year. All University students are eligible to membership in the Dramatic Club, but those desiring to enter must pass a series of tests under the direction of the professor of public speaking.

4. The Crucible. Membership open to advanced students in the Department of Chemistry. Meetings on the first and third Fridays of each month at 4:30 P. M.

5. The Engineering Society. Regular meetings the first and third Friday nights of each month in its room in Engineering Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

6. The University Grange, Number 373, Patrons of Husbandry. Regular meetings on alternate Wednesday evenings. Membership open to all students in the College of Agriculture and to others who may be elected.

7. The English Club. Regular meetings on the first Thursday night of every month.

8. The Beowulf-Gedriht. Regular meetings in October, November, February, April and May. Open to all members of the University upon the fulfillment of certain scholarship qualifications.

9. The Agricultural Association. An organization of the students of the College of Agriculture to promote their general interests. Meetings on first Thursday of each month.

10. The Phil-Hellenic Club. Membership open to all students of Greek. Regular meetings once each month.

11. West Virginia University Scientific Society. Regular meetings on the last Friday night of every month. Membership is open to members of the faculty giving instruction in scientific subjects, local investigators in scientific subjects, teachers of science in the public schools, and graduate students in science in attendance at the University.

12. Glee and Mandolin Clubs. Places on these clubs are open to all male students and are gained in the "try-outs" in September of each year. An annual tour is arranged by a student manager for the advertisement of the University. The Director of the School of Music is the Musical Director.

13. The University Choir. This organization under the direction of the Director of the School of Music is composed of about thirty selected voices and sings in the weekly Convocation exercises. Special appropriate programs are presented at festival seasons.

14. The Education Club. The purpose of the Club is to develop

and maintain a professional attitude in those who are preparing for education work, to study the needs of schools, and to contribute to the advancement of education. Regular meetings are held on the third Thursday night of each month.

15. American Institute of Electrical Engineers. West Virginia University Branch. Meetings monthly. Membership open to students in the Department of Electrical Engineering.

16. University Law Club. Facilities for training in argument in cases on points of law is afforded by this club. Meetings weekly.

STUDENT PUBLICATIONS.

The Athenaeum, a weekly college newspaper, is published by the Student's Publishing Association. The editorial staff of the paper is elected by this association at its annual meeting on the third Saturday in May. Nominations must be made from an eligible list published by the Department of English at least two weeks before the annual meeting. No student will be included in the eligible list who has not attained the rank of sophomore or who has not made an excellent standing in two or more courses in English composition.

The West Virginia Agriculturist is published monthly from October to June by the students of the College of Agriculture.

The College Annual, The Monticola, is published by the junior class.

All student publications are under the supervision of a faculty committee on student publications.

STUDENT SOCIAL LIFE.

The general oversight of the social activities of the student body and of fraternity and sorority life in the University is placed in the hands of committees of the faculty. The committee on fraternities and the committee on sororities are constituted in accord with the following order of the Board of Regents.

(1) No fraternity nor sorority, other than those now in existence in the University shall be established without the consent of the University Council of Administration. Application for this consent shall be made by a petition signed by all of the students interested.

(2) No student shall be initiated into any fraternity or sorority, nor reside in any fraternity house, until such student has been in residence at the University one full semester, and has received credit on the records of the University for not less than twelve semester hours of work done in the University classes; nor shall any student be initiated into any fraternity or sorority, who has not full college standing. The requirement of one semester's residence will be waived

in the case of a student coming into the University from any other university or college, and receiving advanced standing sufficient to give him a classification of sophomore or higher.

3. Each fraternity at the beginning of each scholastic year, shall designate two of its members as a committee to represent the fraternity in all matters calling for conference with the President of the University or University authorities. Each sorority shall likewise select a committee of two to represent it in such conferences. Each fraternity and sorority shall certify to the registrar the names of the members chosen for its committee within two weeks after the opening of the fall semester of each year.

(4) The President of the University shall appoint a member of the faculty as a faculty representative for each fraternity, and in making such appointment he shall consult with the committee of each fraternity provided for in Rule 3. He shall in like manner appoint a faculty representative for each sorority. Wives of members of the faculty may be appointed by the President as faculty representative of sororities.

It shall be the duty of the faculty representative to keep in touch with the life and work of the fraternity or sorority, and to be the representative of the University under the direction of the President in all matters that may arise between the University and the fraternity or sorority. The faculty representatives of fraternities shall constitute a general committee of the faculty on fraternities, and the faculty representatives of sororities shall constitute a like committee on sororities.

(5) No person who is not a student of the University shall be initiated into any fraternity or sorority without the permission of the University Council of Administration.

(6) All efforts by fraternities or sororities to secure new members commonly known as "rushing" shall be under such regulations as may be agreed on by the fraternities and sororities. In the event of no agreement by fraternities or sororities, such regulations shall be made by the faculty committee on fraternities or the faculty committee on sororities in consultation with the fraternity or sorority committees, as provided in rule 3 of this order. When approved by the Council of Administration such regulations shall be in full force and effect.

The social life of the students in the University is under the general supervision of the faculty committee on social affairs. This committee has supervision of every social function given by the University or by any organization within it, including fraternities, sororities and other student societies. Such social functions as balls, dances, picnics, excursions and receptions are supervised by this committee. The committee approves all dance programs, supervises the issuance of invitations for functions of a general University nature and sees that all social affairs held in the University are properly conducted.

In the performance of its duty the committee is governed by the following general regulations of the Board of Regents:

(1) No indoor social function shall be given by the University or any of its departments or organizations in any other place than in University buildings. For this purpose, houses occupied by chartered fraternities or sororities, and the University leased dormitories shall be considered University buildings.

(2) No social affairs at night, of which dancing is a feature, shall be permitted to continue longer than 1 a. m. and this hour is allowable only in formal or "full program" affairs. Ordinary parties, dances, etc., must close not later than 11:30 p. m. Picnics, excursions, boat rides, etc., extending into the night, must be so arranged that the return to the University shall not be later than 11:30 p. m.

WOMEN'S STUDENT GOVERNMENT ASSOCIATION.

All women students of the University whose homes are not in Morgantown, whether they live in the Woman's Hall or in rooming houses in town are members of the student government association. The purpose of this association is to regulate all matters pertaining to the student life of its members, to further in every way the spirit of unity among the women of the University, to increase their sense of responsibility and to be a medium for maintaining a high scholastic standard.

The association has the following officers: a president and a vice-president elected from the senior class; a secretary elected from the sophomore class, and a treasurer elected from the freshman class. The vice-president is also house president. The four officers together with one representative from each sorority, an equal number of non-sorority members, one member from the Young Woman's Christian Association, and one from the freshman class constitute the executive board in which is vested the administration of the association. This board is responsible to the faculty advisory board of the association for all matters pertaining to the social life of the students.

The advisory board consists of the dean of women and two other members of the faculty appointed by the president of the University.

THE DEAN OF WOMEN.

All the interests of the women students of the University are in charge of a special executive officer of the University, the Dean of Women. She is a member not only of the advisory board of the student government association but also of the faculty social committee. Thus she is cognizant of all social activities engaged in by women students. The dean is a resident of the Women's Hall where she comes into intimate personal relation with the young women and has immediate supervision of their social life.

THE WOMEN'S HALL.

The Women's Hall and annex are centrally located at the corner of Willey and Spruce streets, and will accomodate between forty and fifty young women. Miss Susan Maxwell Moore, Dean of Women, is in charge of the Hall. Anyone desiring information as to prices, or available rooms in the halls, should apply to Miss Moore.

OTHER ROOMING PLACES FOR WOMEN STUDENTS.

With the approval of the Dean of Women young women students whose parents are not residents of Morgantown and who can not find accommodation in the Hall, may secure rooming and boarding places with private families in the town. Such students are expected to conform to the usual Hall rules regarding callers and hours and are not permitted to change their places of residence, to be absent from Morgantown, or from their own rooms over night, without the permission of the Dean of Women.

BOARDING AND ROOMING PLACES.

The matter of furnishing information to new students regarding suitable boarding and rooming places is in charge of the Y. M. C. A. and Y. W. C. A. of the University. On their arrival in Morgantown new students should come directly to Woodburn Hall where they will find complete lists of rooms and boarding places and also upper classmen who will help them in finding lodgings and in matriculating. During the opening days of the semester, committees from the two Christian Associations meet new students at trains and are ready to render them every assistance possible.

Young men desiring information in advance of their arrival in Morgantown may address the University Y. M. C. A., Morgantown, W. Va. Young women may address Miss Susan M. Moore, Dean of Women.

AID FOR STUDENTS.

The Employment Bureau, organized by the University Y. M. C. A. undertakes to assist earnest and worthy students who are dependent upon their own efforts for the expenses of their education, to obtain various forms of employment in Morgantown. Prospective students desiring such aid should correspond with Rex B. Hersey, Secretary of the Y. M. C. A., before entering the University, stating the kind of work desired and the nature of past experience in any occupation. The work consists largely in waiting on table, caring for rooms and lawns, clerking in stores, stenographic services, etc.

PRIZES.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only students pursuing courses leading to baccalaureate degrees are eligible for any prize offered.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one semester preceding the semester in which the contest is to be held, and who is not a resident student in good standing in the University in the semester in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest the judges find no manuscript of sufficient merit, there shall be no award of that prize for that year.

Students intending to compete in any essay-writing contest must notify the chairman of the committee on prizes not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application at the President's Office, or to the members of the committee on prizes.

The more important prizes offered in the University are:

The Bryan Prize in Political Science.

The Hon. William J. Bryan has given a sum of money, the annual income of which is to be offered as a prize to the student in the University who shall write the best essay on some subject in the science of government. The amount of the prize for the present is $15.00. The subject for the year 1916-17 is: Administration of the Pure Food and Drug Laws.

The Tax Commission Prize.

The members of the State Tax Commission of 1902, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams, and J. H. Holt, have given the sum of $1,350, the income of which is to be used annually as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of competition are determined by the Council of Administration. The amount of the prize at present is $70.00. The subject for the year 1916-17 is: A Better Method of Taxing Property Subject to Mortgage in West Virginia.

The Russell Love Morris Prize.

Russell Love Morris, C.E., Professor of Civil Engineering, offers a prize of fifty dollars annually to the student of civil engineering who presents the best thesis on some subject of special application to the needs and resources of West Virginia.

The Regent's Prizes in Composition.

A prize of thirty dollars is awarded annually by the board of regents of the University to the student in any one of the regular college courses who shall write the best essay on a topic selected by the committee on prizes. A prize of twenty dollars is awarded for the essay adjudged to be second in merit in such contest. The subject for the year 1916-17 is: Desirable Reforms in Administration of the County Home in West Virginia.

American Law Book Company Prize.

The American Law Book Company offers a set of the Cyclopedia of Law and Procedure with its annual annotations to date to be given as a prize to the student in the College of Law who attains the highest scholarship honor for the work of his third year. "Highest scholarship honor" means that he shall have the highest average grade in all courses taken in the third year.

Only those students are eligible for this prize who receive the degree of Bachelor of Laws in June and who have completed not less than thirty hours of law during the preceding ten months.

A winner of the above prize is eligible to compete for one of three Corpus Juris Scholarships offered by the American Law Book Company. Each scholarship has a cash value of five hundred dollars and must be used for a year of graduate study in law at an approved law school either in the United States or abroad.

Inter-Fraternity Scholastic Trophies.

Arleigh Lee Darby, Associate Professor of Romance Languages, offers a silver cup known as the Inter-Fraternity Scholastic Trophy. It is awarded at the end of the year to the fraternity having the highest average scholarship standing for that year and remains in the possession of that fraternity during the following year. The cup becomes the permanent property of the fraternity that first wins it three times.

Aaron Arkin, Professor of Pathology and Bacteriology, offers a silver cup to be called the "Inter-Sorority Scholastic Trophy." This prize will be awarded at the end of the academic year to the sorority having the highest average scholarship standing for the year. It will be in possession of that sorority for the following year. The cup will become the permanent property of the sorority that first wins it five times.

TEACHERS' BUREAU OF INFORMATION.

The Teachers' Bureau of Information, under the direction of the Department of Education, has for its aim:

1. To keep a record of the students or alumni of the University who wish to teach, to gather information as to their academic and professional qualifications and personal fitness for school work, and to recommend for vacancies those who seem most likely to prove themselves efficient.

2. To keep a similar record of alumni who wish to be transferred to other positions.

3. To assist boards of education and other school officials in securing teachers, and to co-operate with teachers' agencies in placing graduates of the University.

Students desiring recommendation for positions as teachers should take at least twelve hours in education. Those desiring recommendation for a position in a normal school or as principal or superintendent of schools, should take at least twenty-four hours in education.

No student is assured of a position. General letters of recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any services rendered. Blanks for registration will be furnished on application. The following is the committee on recommendation: President Trotter, Professor Friend, Professor Crow, Professor Winkler, and Professor Deahl, secretary.

HIGH SCHOOL AND SUPERVISOR'S CERTIFICATES.

Graduation from the University with not less than twenty semester hours in education will secure recommendation for high school and for supervisor's certificates according to the following regulations:

1. No courses in education will be counted as part of the twenty hours unless approved by the Department of Education.

2. Persons who have received advanced standing in education must do at least ten semester hours in regular college courses. These courses must not repeat those taken in another school and they must be advanced work.

3. Only a limited number of hours done in the summer school may be counted toward certification.

4. Candidates for certification must demonstrate their fitness for recommendation by successful teaching in Education 10 or 22.

5. For the supervisor's certificate not less than five hours must be taken in administration and supervision.

ACCREDITED PREPARATORY SCHOOLS.

In accrediting West Virginia high schools the University follows the classification made by the State Supervisor of High Schools who is also Professor of Secondary Education in the University. Graduates and students of high schools recommended by him are received without examination so far as properly certified credits meet the special requirements of the particular college or school of the University which they desire to enter.

High schools of the first class are supposed to offer sufficient work to enable their graduates to enter any college of the University. Graduates of schools of the second and third classes receive credit for the work certified with the understanding however that no student may enter any college of the University with fewer than thirteen units credit.

Graduates of the State Normal Schools and of all other schools in good standing will receive credit for work properly certified.

The classification of schools published by the State Supervisor of High Schools, is as follows:

Classified High Schools, 1916-17.

HIGH SCHOOLS OF THE FIRST CLASS.

Belington—Belington High School.
Benwood—Benwood-McMechen High School.
Berkeley Springs (conditional)—Mount Wesley High School.
Bluefield—Beaver Pond District High School.
Bramwell—Rock District High School.
Bridgeport—Bridgeport High School.
Buckhannon—Buckhannon High School.
Cairo—Grant District High School.
Cameron—Cameron District High School.
Ceredo—Ceredo-Kenova High School.
Charleston—Charleston High School.
Charleston—Garnett High School (Colored).
Charles Town—Charles Town District High School.
Chester—Chester High School.
Clarksburg—Washington Irving High School.
Clay—Clay County High School.
Cowen— Glade District High School.
Clendenin—Big Sandy District High School.
Davis—Davis High School.
East Bank—Cabin Creek District High School.
Edgewood (Wheeling)—Triadelphia District High School.
Elkins—Elkins High School.
Fairmont—Fairmont High School.

Fairview—Paw Paw District High School.
Farmington—Lincoln District High School.
Flemington—Flemington District High School.
Gary (conditional)—Adkin District High School.
Gassaway—Otter District High School.
Grafton—Grafton High School.
Griffithsville(conditional)—Duval District High School.
Harpers Ferry—Harpers Ferry District High School.
Harrisville (conditional)—Harrisville High School.
Hedgesville—Hedgesville District High School.
Hillsboro—Little Levels District High School.
Hinton—Greenbrier District High School.
Huntington—Huntington High School.
Huntington—Douglass High School (Colored).
Jane Lew—Jane Lew High School.
Keyser—Keyser High School.
Kingwood—Kingwood District High School.
Littleton—Clay District High School.
Logan—Logan District High School.
Lumberport—Eagle District High School.
Mannington—Mannington District High School.
Martinsburg—Martinsburg High School.
Matewan (conditional)—Magnolia District High School.
Middlebourne—Tyler County High School.
Milton (conditional)—Grant District High School.
Morgantown—Morgantown High School.
Moundsville—Moundsville High School.
Mount Hope—Fayetteville District High School (No. 2).
New Cumberland—New Cumberland High School.
New Martinsville—Magnolia District High School.
North Fork—North Fork-Elkhorn District High School.
Oak Hill—Fayetteville District High School.
Parkersburg—Parkersburg High School.
Parkersburg—Sumner High School (Colored).
Parsons—Black Fork District High School.
Paw Paw—Great Cacapon District High School.
Pennsboro—Clay District High School.
Piedmont—Piedmont High School.
Point Pleasant—Point Pleasant High School.
Princeton—East River District High School.
Ravenswood—Ravenswood High School.
Reader—Green District High School.
Richwood—Richwood High School.
Ronceverte—Fort Spring District High School.
Salem—Salem High School.
Sherrard—Union District High School.
Shinnston—Clay District High School.
Sistersville—Sistersville High School.
Spencer—Spencer High School.
Summersville—Nicholas County High School.
Sutton— Sutton High School.
St. Albans—St. Albans High School.
St. Marys—Washington District High School.
Thomas—Fairfax District High School.
Terra Alta—Portland District High School.

Tunnelton—Kingwood District High School.
Webster Springs—Fork Lick District High School.
Welch—Brown's Creek District High School.
Wellsburg—Wellsburg High School.
Weston—Weston High School.
West Milford—Union District High School.
West Union (conditional)—West Union High School.
Wheeling—Wheeling High School.
Williamson—Williamson High School.
Williamstown—Williams District High School.

HIGH SCHOOLS OF THE SECOND CLASS.

Albright—Portland District High School.
Alderson—Alderson High School.
Ansted—Mountain Cove District High School.
Berwind—Big Creek District High School.
Beverly—Beverly District High School.
Bristol—Ten Mile District High School.
Burnsville—Burnsville High School.
Clarksburg—Water Street High School (Colored).
Elk Garden—Elk District High School.
Fayetteville—Fayetteville District High School.
Follansbee—Cross Creek District High School.
Franklin—Franklin District High School.
Holidays Cove—Butler District High School.
Kimball—Brown's Creek District High School (Colored).
Lost Creek—Grant District High School.
Mason—Mason High School.
Masontown—Valley District High School.
Matoaka—Rock District High School.
Newburg—Lyon District High School.
Newell—Grant District High School.
New Haven—Graham District High School.
Marlinton—Edray District High School.
Philippi—Philippi High School.
Rivesville—Paw Paw District High School.
Romney—Romney District High School.
Rowlesburg—Reno District High School.
Simpson—Court House District High School.
Thoburn (West Monongah)—Lincoln District High School.
Union—Union District High School.
Wallace—Sardis District High School.
Warwood (Wheeling)—Richland District High School.
Wheeling—Lincoln High School (Colored).
White Sulphur Springs—White Sulphur District High School.

HIGH SCHOOLS OF THE THIRD CLASS.

Barracksville—Fairmont District High School.
Beckley (Mabscott)—Town District High School.
Blacksville—Battelle District High School.
Bunker Hill—Mill Creek District High School.
Danville—Scott District High School.

Dunbar—Union District High School.
Dunleith—Ceredo District High School.
Eccles—Trap Hill District High School.
Elizabeth—Elizabeth High School.
Elk Ridge (Algoma)—North Fork District High School (Colored).
Fairmont—Fairmont High School (Colored).
Fellowsville—Reno District High School.
Flatwoods—Flatwoods High School.
Friendly—Union District High School.
Great Cacapon—Great Cacapon District High School.
Hill Top—Fayetteville District High School (Colored).
Jacksonburg—Grant District High School.
Leetown—Middleton District High School.
Lenore—Hardee District High School.
Lewisburg—Lewisburg High School.
Man—Triadelphia District High School.
Moorefield—Moorefield District High School.
Morgantown—Morgantown High School (Colored).
Oceana—Oceana District High School.
Petersburg—Petersburg High School.
Peterstown—Red Sulphur District High School.
Pine Grove—Grant District High School.
Pineville—Center District High School.
Pullman—Union District High School.
Ripley—Ripley High School.
Sabraton—Morgan District High School.
Smithfield—Grant District High School.
Spanishburg—Rock District High School.
Wadestown—Battelle District High School.
Wyatt—Eagle District High School.

SCOPE OF THE ENTRANCE REQUIREMENTS.

The following description indicates the extent of preparation expected in each of the several subjects offered for entrance credit for admission to the various colleges of the University.

ENGLISH.

Grammar and Elementary English. No student will receive entrance credit in English whose work shows marked deficiency in spelling, punctuation, grammar, sentence structure, or paragraphing. The student should be prepared to state intelligently the essential principles of English grammar and to explain the syntactical structure of any sentence encountered in his reading. An elementary text-book on grammar should have been completed before the student enters upon his high school course. For more advanced study of the subject and for practical review, the material presented in the ordinary high school text-books on rhetoric may be utilized. The subject should be constantly reviewed in connection with the work in composition during the four years in the high school course.

Rhetoric and Composition. Systematic practice in theme writing and other forms of oral and written composition with instruction in the principles of rhetoric and the forms of discourse must form an important part of each unit of English. At least one theme weekly should be required throughout the course. Students who are not able to express themselves in clear, correct, and idiomatic English will not be given full credit. The subjects upon which the student writes should not be drawn exclusively from literature. A considerable portion of them should be so distributed as to give proper training in the various forms of discourse.

The three units in English should include the following:

(a) One unit. English Classics and English Composition. The thorough study of at least five English classics selected from the list below. The simplest narrative classics, both prose and poetry, should be selected. The aim of the work should be to stimulate interest in good literature and to enable the student to form vivid mental pictures and to understand fully the thought expressed. The aim of the composition work should be to secure facility and accuracy. The work should include letter writing, short themes in narration and description, and study of paragraphing and sentence structure.*

*Reading of good literature outside of class and memorizing of notable passages in prose and verse should be required, but outside reading accompanied by written reports or reviews made according to a sterotyped model, in place of a thorough study of assigned lessons, class instruction and discussion, will not be considered as satisfactorily fulfilling the requirement of any unit.

(b) One unit. English Classics and English Composition. Thorough study of five other English Classics. The work should include more complex forms of fiction and narrative poetry, simpler essays, and at least one of Shakespeare's plays. The aim should be to make a study of form, structure, style, and purpose of the selection; the author's life; relation of the selection to its age and to other works of similar type. The work in composition should include themes of moderate length in all forms of discourse; study of unity, coherence, and emphasis in sentences and paragraphs; kinds of sentences; diction; figures of speech.

(c) One unit. Advanced study of Classics; Rhetoric. A thorough and intensive study of the form, structure, and style, of at least one typical example of the novel, the drama, the lyric or epic poem, and the essay. A study of the principles of rhetoric, employing some good advanced high school text-book, with frequent and systematic theme writing, must form a part of this unit.

(d) A fourth unit will be allowed in English done in the schools in which the work of high school grade is carried through four full years and the instructor has been especially prepared in English and has no work outside of that subject, provided that the work shall include history of literature, oral composition, and some study of good current literature, including magazines and newspapers.

The following list of classics is suggested:

For the first unit: Longfellow's Evangeline and Courtship of Miles Standish; Whittier's Snow Bound; Lowell's Vision of Sir Launfal; Coleridge's Rime of the Ancient Mariner; Macaulay's Lays of Ancient Rome; Goldsmith's Deserted Village; Irving's Sketch Book; Hawthorne's Twice Told Tales; Franklin's Autobiography; Aldrich's Story of a Bad Boy; Warner's Being a Boy, A Hunting of the Deer, etc.; Burroughs' Sharp Eyes, Birds and Bees, etc.; Dickens' Christmas Carol; Stevenson's Treasure Island.

For the second unit: The Bible; Scott's Lady of the Lake, Marmion, Ivanhoe, Quentin Durward; George Eliot's Silas Marner; Goldsmith's Vicar of Wakefield; Mrs. Gaskell's Cranford; Cooper's Last of the Mohicans, The Spy, The Pilot; Blackmore's Lorna Doone; Dickens' Tale of Two Cities, David Copperfield; Arnold's Sohrab and Rustum; Byron's Mazeppa and the Prisoner of Chillon; Shakespeare's Merchant of Venice, As You Like It, Julius Caesar, Twelfth Night; Addison's De Coverly Papers; Thoreau's Succession of Forest Trees; Stevenson's An Inland Voyage and Travels with a Donkey; Kipling's Captains Courageous.

For the third unit: Novels: Thackeray's Henry Esmond; George Eliot's Silas Marner or Romola; Jane Austin's Pride and Prejudice; Hawthorne's The House of the Seven Gables. Dramas: Shakespeare's Macbeth, Lear, or Henry V. Poems: Tennyson's Idylls of the King; Milton's Shorter Poems; Browning's Selected Poems; Palgrave's Golden Treasury. Essays: Lamb's Essays of Elia; Emerson's Essays; Ruskin's Sesame and Lilies; Carlyle's Heroes and Hero Worship;

Essay on Burns; Macaulay's Essay on Addison and Life of Johnson; Washington's Farewell Address; Webster's Bunker Hill Oration; Lincoln's Gettysburg Speech, etc.

Supplementary list: One or two selections may be made for each year from the following American Stories: Page's Red Rock; Churchill's Mr. Crewe's Career; Thompson's Alice of Old Vincennes; Morris' The Pit; Jackson's Ramona; Smith's Caleb West, Master Diver; Johnston's To Have and to Hold; Van Dyke's The Blue Flower and Other Stories; Mitchell's Hugh Wynne—Free Quaker.

LATIN.

(a) One unit. Such knowledge of inflection and syntax as is given in any good preparatory Latin book, together with the ability to read easy selections from Caesar.

(b) One unit. Four books from Caesar's Gallic War, or its equivalent in Latin of equal difficulty. The ability to write simple Latin based on the text.

(c) One unit. Six orations of Cicero. The ability to write simple Latin based on the text. The simpler historical references and the fundamental facts of Latin syntax.

(d) One unit. Six books of Virgil, with history and mythology. Scansion of hexameter verse. Either (c) or (d) may be offered for the third unit, but one year of composition must be included.

GREEK.

(a) One unit. Introductory lessons, elements of grammar; easy translations from the Anabasis; translation into Greek of easy continuous prose based upon the Anabasis.

(b) One unit. Xenophon, the first four books of the Anabasis.

(c) One unit. Homer, the first three books of the Iliad (omitting II-492 to end) and the Homeric constructions, forms, and prosody; constant practice in sight translation and prose composition.

GERMAN.

(a) One unit. A thorough knowledge of elementary syntax; constant drill in pronunciation, oral translation, and composition; translation of seventy-five to one hundred pages; advanced syntax; composition throughout the year.

(b) One unit. Modern prose and familiar poems, two hundred pages; advanced syntax; intermediate composition throughout the year.

(c) One unit. Advanced prose, four hundred pages; advanced composition throughout the year.

FRENCH.

(a) One unit. (1) The essential principles of French etymology and syntax, and especially, a thorough knowledge of the pronoun and of the regular and irregular verb; (2) ability to write in French sentences of moderate difficulty; (3) the reading of from one hundred and fifty to two hundred pages of modern French prose; (4) ability to pronounce the language correctly and with some fluency.

(b) One unit. (1) Continued systematic study of French grammar, including syntax; (2) the reading of from three to four hundred pages of modern French; (3) practice in writing from dictation.

(c) One unit. (1) Twenty pages of advanced prose composition; (2) at least three hundred pages of modern French prose; (3) at least three hundred pages of modern French plays.

HISTORY.

From one to three units may be offered, selected from the following:

(a) Ancient History to 800 A. D.—one unit.

(b) Mediaeval and Modern European History—one-half to one unit. The amount of credit will depend upon the time given to the subject.

(c) English History—one-half to one unit. The amount of credit will depend upon the time given.

(d) American History, or American History and Civics—one unit.

The student should be familiar with the important events and should have a clear knowledge of the general development of the period of history which he offers for credit.

A whole year that covers the whole field of general history with a good text-book and with notes on collateral reading and preparation of maps will be accepted as one unit, although it is believed that better results will be obtained by spending a whole year on ancient history and another year on the mediaeval and modern period.

American history and civics should be preceded by English history, and should not be given before the third year in the high school course, in case three years are given to history. Ancient history should be followed by English history in case mediaeval and modern history are not given.

The study of civics must not precede the study of American history; and, if studied as a separate branch following the course in American history, some advanced text such as Forman's Advanced Civics should be used. An outline knowledge of elementary civics, such as is presented in Forman's First Lessons in Civics, or in Peterman's Civics, is presupposed.

MATHEMATICS.

(a) Algebra through quadratics—one unit. The four fundamental operations for rational algebraic expressions; factoring, highest common factor, lowest common multiple, complex fractions, solution of equations of the first degree, radicals including the extraction of the square root of polynomials and numbers, fractional and negative exponents, quadratic equations, and equations containing one or more quadratic equations, and problems involving the use of such equations.

(b) Plane geometry—one unit. The completion of any standard text with original exercises and problems.

(c) Algebra—one-half unit. Review of essentials followed by ratio and proportion, the binomial theorem for positive and integral exponents, arithmetical and geometrical progressions.

(d) Solid geometry—one-half unit. Properties of straight lines and planes, dihedral and polyhedral angles, projections, polyhedrons, including prisms, pyramids, and the regular solids, cylinders, cones, and spheres, spherical triangles, measurements of surfaces and solids.

(e) Plane trigonometry—one-half unit. Definitions and relations of the six trigonometrical functions as ratios, proofs of important formulæ, theory of logarithms and use of tables, solution of right and oblique plane triangles.

SCIENCE.

(a) Physics—one unit. Credit will be given for one year's work with any standard text book, upon the presentation of a satisfactory note book, covering at least thirty-two experiments. The note book should contain the student's own record of his laboratory experiments and a signed statement from his teacher that the book is the original record of the student's observations. Students deficient in laboratory work may make up this deficiency in the University.

(b) Chemistry—one unit. Credits will be allowed for the completion in a satisfactory manner of any standard elementary text in inorganic chemistry, accompanied by individual laboratory work. A full year should be given to the work.

(c) Botany—one unit.

(d) Zoology—one unit.

Work in either botany or zoology, to be credited, must have been accompanied by individual laboratory work. The exact extent of the work which should be done cannot be stated here, but, for the maximum credit, it should be as much as a competent teacher, trained in laboratory methods, can accomplish in from one, to one and one-half

years. In estimating the time employed, two hours of laboratory work will be counted as the equivalent of one recitation period. It will be necessary for applicants to present their laboratory notes and drawings.

In botany the class should cover the ground of Coulter's "A Text Book in Botany," or Bergen's "Foundation of Botany," or their equivalent.

In zoology the class work should cover about what is represented in Kellogg's "Elementary Zoology" (Henry Holt), or in Parker and Haskell's Zoology, one-volume edition (Macmillan & Co.). The amount of laboratory work that should be done is somewhat less than is outlined in Scheffer's manual (Blakiston).

(e) Biology. A half year of botany and a half year of zoology, each accompanied by individual laboratory work.

(f) Physical Geography—one-half unit.

(g) Physiology—one-half unit.

Credit for one-half unit each in physical geography and physiology will be allowed—as elective only—if taught in a scientific manner in an accredited or recognized secondary school. The use of a standard text should be supplemented by proper illustrative methods and proper observation. One-half year must be given to each subject.

DRAWING.

One unit. To receive entrance credit in free hand drawing, instruction should have been designed to give the student an intelligent and accurate conception of form, light, and shade, and the ability to express simply and directly, such objects as natural and geometrical form, still life, architectural details, and casts from nature, the antique, and life.

The training of the eye to observe with understanding, rather than the teaching of any particular method of expression, should be the aim of the instructor. No mechanical aids should be employed. The pencil is recommended as the simplest and most convenient medium for elementary work. It is desirable that students seeking credit for drawing shall submit their work in addition to their general certificate.

VOCATIONAL SUBJECTS.

(Including Agriculture, Commercial Subjects, Household Arts and Manual Training.)

One of three units. At present no very specific requirements can be stated for preparation in these subjects in secondary schools. The approval of work from any school for admission to the University will be conditioned upon the satisfactory training and efficiency of the teachers of the subject and upon the adequacy of the school equipment.

The work in agriculture should comprise a study of soils, plants, forage crops, grains, farm animals, feeding, fruit growing, gardening, insects, diseases, etc., with laboratory and field work. Texts of a secondary grade such as Warren's "Elements of Agriculture," "High School Agriculture" by Mayme and Hatch, or "Agriculture through the Laboratory and School Garden" by Jackson and Daugherty, or books of equal grade should be used. Examinations are based on texts of this character, and credit will not be given for work done with similar texts designed for grammar school work.

THE COLLEGE OF ARTS AND SCIENCES

THE FACULTY.

FRANK BUTLER TROTTER, LL.D., *President*

JAMES MORTON CALLAHAN, PH.D., *Dean and Professor of History and Political Science*

DANIEL BOARDMAN PURINTON, LL.D., *President and Professor of Philosophy, Emeritus*

JAMES SCOTT STEWART, B.S., *Professor of Mathematics, Emeritus*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL BOARDMAN BROWN, A.M., *Professor of Geology and Mineralogy*

ROBERT ALLEN ARMSTRONG, L.H.D., *Professor of the English Language and Literature*

ALFRED JARRETT HARE, A.M., *Professor of the Latin Language and Literature*

FREDERICK WILSON TRUSCOTT, PH.D., *Professor of Germanic Languages and Literature*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany*

JASPER NEWTON DEAHL, PH.D., *Professor of Education*

JOHN HARRINGTON COX, A.M., *Professor of English Philology*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

ALBERT MOORE REESE, PH.D., *Professor of Zoology*

OLIVER PERRY CHITWOOD, PH.D., *Professor of European History*

CHARLES EDMUND NEIL, A.B., *Professor of Public Speaking*

CHAUNCEY WILLIAM WAGGONER, PH.D., *Professor of Physics*

MADISON STATHERS, PH.D., *Professor of Romance Languages*

WAITMAN BARBE, LITT.D., *Professor of English*

ENOCH HOWARD VICKERS, A.M., *Professor of Economics and Sociology*

LLOYD LOWNDES FRIEND, A.M., *Professor of Secondary Education*

CHARLES EDWARD BISHOP, PH.D., *Professor of the Greek Language and Literature*

JOSEPH ELLIS HODGSON, PH.D., *Professor of Mathematics*

FRIEND EBENEZER CLARK, PH.D., *Professor of Chemistry*

FRANCIS LORETTE STRICKLAND, PH.D., D.D., *Professor of Philosophy*

JAMES HOWARD LAUBACH, *Professor of Military Science and Commandant of Cadets*

CHARLES BENTON CANNADAY, A.M., *Professor of Latin*

SIMEON CONANT SMITH, A.M., *Associate Professor of Rhetoric*

ARLEIGH LEE DARBY, A.M., *Associate Professor of Romance Languages*

DAVID DALE JOHNSON, A.M., *Associate Professor of English*

ASA GEORGE STEELE, PH.D., *Associate Professor of Education*

DENNIS MARTIN WILLIS, LL.M., *Assistant Professor of Commerce*

LONNA DENNIS ARNETT, PH.D., *Librarian and Instructor in Library Science*

*BENJAMIN WALTER KING, A.B., *Assistant Professor of Economics*

CHARLES SUMNER CROW, A.M., *Assistant Professor of Education*

WILLIAM ARMSTRONG PRICE, JR., PH.D., *Assistant Professor of Geology*

LUCIUS MOODY BRISTOL, PH.D., *Assistant Professor of Sociology*

HUBERT HILL, M.S., *Assistant Professor of Chemistry*

GEORGE EDMONDSON PYLE, *Assistant Professor of Physical Education*

ROBERT CLIFTON SPANGLER, A.M., *Instructor in Botany*

MARGARET BUCHANAN, A.B., *Instructor in Mathematics*

*On leave of absence, 1916-17.

MARY MEEK ATKESON, A.M., *Instructor in English*

EDWARD MACK, JR., PH.D., *Instructor in Chemistry*

JAMES GRANTHAM, A.M., *Instructor in German*

CHARLES MOON, B.S.C.E., *Instructor in Physics*

DONALD MONROE GILBERT, PH.B., *Instructor in Romance Languages*

HUBERT MILO FREEMAN, A.B., *Instructor in Physics*

IVAN VAUGHAN DETWEILER SHUNK, A.M., *Instructor in Botany*

CHESTER PENN HIGBY, A.M., *Instructor in History*

HARRISON RANDALL HUNT, PH.D., *Instructor in Zoology*

MRS. LOUISE FERRIS CHEZ, *Instructor in Physical Training for Women*

LUELLA REBECCA POLLOCK., A.M., *Instructor in English*

SAMUEL MORRIS, A.M., *Instructor in Chemistry*

LESTER ELWIN FRAZIER, *Student Assistant in Chemistry*

RUSSELL LAYMAN SATTERFIELD, *Student Assistant in Chemistry*

HOWARD JOHNSON TEMPLETON, *Student Assistant in Chemistry*

BRACE SLOAN KNABENSHUE, *Student Assistant in Chemistry*

JULIAN LAMAR HAGEN, A.B., *Student Assistant in History*

BERNAL ROBINSON WEIMER, A.B., *Student Assistant in Zoology*

GEORGE SPENCER COOPER, JR., *Student Assistant in Chemistry*

BRISON EDWARD KIMBLE, *Student Assistant in Physics*

OTTO WELTON SNARR, *Student Assistant in Zoology*

MERRILL HALE THORN, *Student Assistant in Mathematics*

DORSEY BRANNAN, B.S. AGR., *Student Assistant in Zoology*

COMMITTEE ON STUDENTS' COURSES AND HOURS: President TROTTER, Dean CALLAHAN and Professor DEAHL.

ENTRANCE REQUIREMENTS.

For admission to the College of Arts and Sciences, the candidate must have credit for fifteen units, obtained by examination or on certificate from a duly accredited secondary school.

1. English: Students are admitted to the freshman classes in English on completion of a four-year high school course in English, or its equivalent, and receive credit for three or four units.*

2. Foreign Language: Two units of one language are required. (Latin is prescribed for students in this college preparing to enter the College of Law and School of Medicine.)

3. Mathematics: One unit of algebra and one of plane geometry are required.

4. History: One unit is required.

5. Science: One unit is required of either physics, chemistry, botany, zoology, or biology.

6. Elective: Enough is required from the following list to complete 15 units:

Drawing (free hand and mechanical)	1 to 2 units
French	1 to 3 "
German	1 to 3 "
Latin	1 to 4 "
Greek	1 to 3 "
Mathematics	½ to 1½ "
Science	1 to 3 "
Social Science (including history, civics and economics	1 to 3 "
Vocational subjects (including agriculture commercial subjects, household arts, and manual training)	1 to 3 "

Other subjects which have a recognized place in the first-class high schools will also be accepted by the committee on entrance. Students who have completed an accepted four-year high school course, even if they have not taken the specified work, will be admitted and an opportunity will be given to make up the required work later.

† A single unit of language will not be accepted unless further work in that language is taken in the University.

For a detailed statement of the amount of work required for each unit of entrance credit see page 58.

*Four units will be allowed in English done in schools in which the work of high school grade is carried through four full years and the instructor has been especially prepared in English and has no work outside of that subject. See page 59.

REQUIREMENTS FOR DEGREES.

BACCALAUREATE DEGREES.

Only one baccalaureate degree is regularly conferred in the College of Arts and Sciences, that of Bachelor of Arts.

The degree of Bachelor of Science is conferred only as a first degree upon candidates who are pursuing either the combined science and engineering course, the combined science and agriculture course, or the combined scientific and medical course. See page 70.

Amount of Work Required.

The "semester hour" is the standard for computing the amount of work required for graduation in the curricula leading to these degrees. The "hour" represents the amount of work done in one semester (eighteen weeks) in one recitation hour with two preparation hours a week. No student is permitted to register for less than fourteen hours or more than seventeen hours of work in any one semester.

The baccalaureate degree in the College of Arts and Sciences is conferred upon any student who satisfies all entrance requirements and secures credit for one hundred and twenty-eight semester hours selected in accordance with the following provisions:

The Major Subject.

At the beginning of the sophomore year the student must select as his major study one of the following subjects:

English	History	Botany
Public speaking	Political science	Zoology
Greek	Economics	Entomology
Latin	Sociology	Geology
German	Physics	Education
French	Chemistry	Philosophy
Italian	Mathematics	Psychology and logic
Spanish		Home economics

The head of the department to which this major subject belongs becomes the student's class officer. The major requirement is 30 hours, which may be either 30 hours in the one major subject or 20 to 25 hours in that subject with 5 to 10 hours in another subject closely related. The class officer may designate the courses to be taken in the major and the allied subjects and may require at least

25 hours in the one subject. Additional courses in the major subject or in the allied subject may of course be taken as elective if the student so desires.

Special Requirements.

For Students who Desire the Degree of A.B.

During his course each student must take:

1. English composition (English 1 and 2)..... 6 Hrs.
   English literature (English 26 and 27)..... 4 "
2. One foreign language.....20 "
   NOTE.—If this language is not the same as that offered for entrance then an additional 3 hours college work in the entrance language must also be offered.
3. History, political science, or economics..... 8 "
4. Physics, chemistry, or mathematics; any one 8 "
5. Botany, zoology, geology or entomology; any one ..... 8 "
6. Public speaking, education, philosophy; any one ..... 8 "
7. Military science (when required)..... 4 "
8. Electives; not less than.....32 "

   NOTE.—At least five hours must be taken in each subject offered as an elective, except that not more than eight hours of credit in isolated courses of less than five hours credit value each, elected with the approval of the class officer, may be offered.

For Students Who Desire to Take a Combined Course in Two Colleges in Six Years.

Students who desire to secure the degree of A.B. and LL.B. in six years may, after completing ninety-six hours (see above) in the College of Arts and Sciences elect the first year of the curriculum in Law (see page 251) as the work of their senior year. After receiving the A.B. degree they may then complete the Law Course in two years.

Students who desire to secure the B.S. degree and then take a bachelor's degree in the college of Engineering may complete the work for both degrees in six years or less by following the curriculum outlined on page 166. Those who desire to secure the B.S. and B.S. Agr. degrees in a similar time must follow the curriculum outlined on page 210.

Students who desire to secure the B.S. degree with a view to proceeding to the study of medicine and who announce this intention

on entering the freshman class will be excused from the foregoing general requirements and may secure the degree of B.S. by taking sixty-four hours of work in the College of Arts and Sciences as outlined on page 263 and the course in the School of Medicine as outlined on page 264.

Elective Courses.

The remaining work necessary to make up the total of one hundred and twenty-eight hours required of candidates for the bachelor's degree, may be selected from any of the courses offered in the College of Arts and Sciences. Work not to exceed fifteen hours in the College of Law, the College of Agriculture, or the College of Engineering may be included in the list of elective credits offered by students in the College of Arts and Sciences. The total number of hours elected from other colleges shall not, however, exceed twenty-four in all.

Classification of Students.

To be classified as a conditioned freshman in the College of Arts and Sciences a student must have credit for at least thirteen units of entrance requirements; to be classified as a regular freshman he must have credit for fifteen units. To be classified as a sophomore he must have fulfilled all entrance requirements and have credit for twenty-five hours of college work; as a junior, fifty-eight hours; as a senior, ninety-two hours.

GRADUATE DEGREES.

There are two advanced degrees conferred in the College of Arts and Sciences: Master of Arts and Master of Science. For the conditions upon which these degrees are granted see page 39.

COURSES OF INSTRUCTION.

In the following announcements each course described counts for the number of hours in parenthesis after the name of the course. Whenever possible, the semester during which the course is given, the hour, the name of the instructor, and class room, are stated at the end of the announcement of each course. For convenience it is customary to designate the courses of study by the name of the department and the number of the particular course. Thus the course in psychology is known as "Philosophy 1"; the course in plane trigonometry is known as "Mathematics 4"; the course in electrical measurements is known as "Physics 10"; etc. The abbreviations used are: W., Woodburn Hall; S., Science Hall; M., Martin Hall; M. H., Mechanical Hall; C., Commencement Hall; A., Agricultural Building; F., Fife Building; G., Gymnasium; L., Library; H. Horticulture Building; M. B., Medical Building.

AGRONOMY AND ANIMAL INDUSTRY.

Credit will be given in the College of Arts and Sciences for courses 2 and 21 in agronomy, courses 40, 42, 43, 45, and 46 in animal husbandry, and course 21 in dairy husbandry in the College of Agriculture. See pages 212 to 219.

BOTANY.

Professor SHELDON, Mr. SPANGLER and Mr. SHUNK.

NOTE.—For a description of the botanical laboratories see page....

1. **General Botany.** (4 Hrs.) Lectures and quizzes on protoplasm, the cell, and the morphology, physiology, classification, and economic importance of algae and fungi in general, with laboratory and field work. Laboratory fee, $1.50.

First semester; T. Th., 9:00; Professor SHELDON; laboratory, W. F., 2:00; Mr. SHUNK, F.

2. **General Botany.** (4 Hrs.) Continuation of Botany 1. Lectures and quizzes on the morphology, physiology, classification, and economic importance of the liverworts, mosses, ferns, and seed-plants, with laboratory and field work. Laboratory fee, $1.50.

Second semester; T. Th., 9:00; Professor SHELDON; laboratory, W. F., 2:00; Mr. SHUNK, F.

3. General Botany. (4 Hrs.) This and the following course are primarily for students who cannot give as much time to the work as is required for courses 1, 2, and 5. The course includes a general survey of the various groups of plants—algae, fungi, mosses, ferns, and seed-plants. Laboratory fee, $1.50.

First semester; T. Th. or W. F., 8:00; Professor SHELDON; laboratory sections, T. Th., W. F., Th. M., T. F., 2:00; T., 2:00, S., 9:00; Mr. SPANGLER, F.

4. Seed-Plants. (4 Hrs.) First half-semester: Morphology, physiology, and economic importance of seed-plants. Some field work is required. Second half-semester: Characteristics of the principal families of seed-plants; practice in the use of a manual for identification and classification. A collection is required. Laboratory fee, $1.50.

Second semester; T. Th. or W. F., 8:00; Professor SHELDON; laboratory sections, T. Th., W. F., Th. M., T. F., 2:00; T., 2:00; S., 9:00; Mr. SPANGLER, F.

5. Systematic Botany of Seed-Plants. (3 Hrs.) This course includes a brief survey of the development of systematic botany, a review of the morphology of seed-plants, and practice in identification and classification. A collection is required.

Second semester; M. W. F., 4:30; field work for the most part, instead of class work, after about April first; Professor SHELDON, F.

NOTE.—Special courses in systematic botany of the fresh-water algae, fungi, liverworts, mosses, ferns, grasses and sedges, shrubs and trees, and weeds will be arranged for students who have had sufficient preparation to profit by such courses.

10. General Bacteriology. (3 Hrs.) This is a general course on the nature of bacteria—what they are, how they live, and what they do—with practice in growing and studying them. Laboratory fee, $2.50.

First semester; T. Th., 11.00; Professor SHELDON; laboratory, T. or Th., 2:00; Mr. SHUNK, F.

Second semester; hours as in first semester.

2 + 1 Lab - 3 hrs

12. Plant Physiology. (3 Hrs.) A fundamental course on the relation of plant structure to function and stimulus. Some knowledge of chemistry and physics is desirable. Laboratory fee, $1.00.

First semester; T. Th., 10:00; laboratory, T. or Th., 2:00; Professor SHELDON, F.

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13. Plant Physiology. (3 Hrs.) The physiology of plant production. The preparation of a paper on the physiology of some special crop is required. Prerequisite: Botany 12.

Second semester; T. Th., 10:00; Professor SHELDON, F.

14. Plant Pathology. (5 Hrs.) Open to seniors and graduate students. Botany 12 should precede or accompany this course. The development of plant pathology and the nature, causes, and control of some of the common diseases of economic plants. A collection is required. Laboratory fee, $2.00.

First semester; M. F., 10:00; laboratory, M. W. or W. F., 2:00; Professor SHELDON. F.

15. Plant Pathology. (3 Hrs.) Open to seniors and graduate students. This course will include comparative studies of normal and diseased tissues, culture methods of bacteria and fungi, and experiments in inoculation. A previous knowledge of bacteriological technique and some systematic work on seed-plants and fungi will be of advantage in this course. Prerequisite: Botany 14. Laboratory fee, $2.00.

Second semester; hours to be arranged; Professor SHELDON. F.

17. Advanced Plant Pathology. (3 to 10 Hrs.) Open to graduate students only. The critical investigation of an assigned or approved problem. Laboratory fee to cover cost of material used.

Both semesters; hours to be arranged; Professor SHELDON, F.

18. Histology. (3 Hrs.) A study of tissues and tissue aggregates. The technique of imbedding, sectioning, mounting, and staining. Laboratory fee to cover cost of material used.

Both semesters; hours to be arranged.

20. Botanical Technique. (3 Hrs.) This course is for students who expect to teach botany or do research work. It will include methods of collecting and preserving plant material and the preparation of permanent mounts. Laboratory fee to cover cost of material used.

Both semesters; hours to be arranged.

21. Methods of Teaching Botany. (3 Hrs.) Primarily for those preparing to teach botany in the high schools of West Virginia. Elective for juniors and seniors who have taken at least ten hours of college botany.

Second semester; hours to be arranged; Professor SHELDON, N. F.

CHEMISTRY.

Professor WHITEHILL, Assistant Professor HILL, Mr. MACK and Mr. MORRIS.

NOTE.—For description of chemical laboratories see page 24.

1. Inorganic Chemistry. (4 Hrs.) This course is primarily for beginners, but students who have offered elementary chemistry for entrance credit may take the course and receive credit on their college work. The course includes a study of the theories and laws of chemical operations and combinations and of the non-metallic elements. Experimental lectures, and recitations. One laboratory period each week. Laboratory fee, $3.00.

First semester; M. W. F., 9:00; T. Th. F., 10:00; M. W. F., 11:00; Professor WHITEHILL, 20 S. T. Th. F., 10:00; M. W. F., 11:00; Assistant Professor HILL, 23 S. M. W. F., 9:00; Mr. MORRIS, 23 S. Laboratory sections; M. T. W. Th. F., 2:00; T., 10:00; S., 9:00; Mr. MACK, and Mr. MORRIS, 21 and 22 S.

2. Inorganic Chemistry. (4 Hrs.) A continuation of Chemistry 1. This course includes the study of the metallic elements. Special attention is paid to the applications of chemistry to agriculture, engineering, medicine and every day life. Experimental lectures and recitations. One laboratory period each week. Laboratory fee, $3.00.

Second semester; M. W. F., 9:00; T. Th. F., 10:00; M. W. F., 11:00; Professor WHITEHILL, 20 S. T. Th. F., 10:00; M. W. F., 11:00; Assistant Professor HILL, 23 S. M. W. F., 9:00; Mr. MORRIS, 23 S. Laboratory sections; M. T. W. Th. F., 2:00; T., 10:00; S., 9:00; Mr. MACK and Mr. MORRIS, 21 and 22 S.

3. Organic Chemistry. (2 Hrs.) This course is open to students who have completed any standard elementary text in inorganic chemistry, accompanied by individual laboratory work. It is also open to students who have completed Inorganic Chemistry 1 and are taking Inorganic Chemistry 2 in the same semester. Experimental lectures, recitations, and laboratory work.

Second semester; T. Th., 9:00; Professor WHITEHILL, 20 S.

4. Qualitative Analysis. (2 Hrs.) Required of all candidates for engineering degrees. A continuation of Chemistry 2. The course treats of those properties which are of importance in the separation and identification of the common metals and acids. Chemical reac-

tions are studied from the point of view of modern theories of solutions. Laboratory fee, $6.00.

First semester; T. Th., 2:00-5:00; Mr. HILL and Mr. MORRIS. 31 S.

5. Qualitative Analysis. (4 Hrs.) For students in the College of Arts and Sciences. A continuation of Chemistry 2. A course similar in its general nature to Chemistry 4, but more extended. Laboratory fee, $9.00.

First semester; M. W. F., 2:00-5:00; Professor CLARK, Mr. HILL and Mr. MORRIS. 31 S.

6. Quantitative Analysis. (5 Hrs.) For students in the College of Arts and Sciences. A course treating of the elementary principles of gravimetric and volumetric analysis. Laboratory fee, $8.00.

Second semester; M. T. W. Th. F., 2:00-5:00; Professor CLARK, 23 S.

17. Qualitative and Quantitative Analysis. (4 Hrs.) A course primarily for students of pharmacy. Laboratory fee, $8.00.

First semester; M. W. F., 2:00-5:00; Professor CLARK, Assistant Professor HILL and Mr. MORRIS.

18. Qualitative and Quantitative Analysis. (5 Hrs.) A course for students preparing for medicine. Laboratory fee, $10.00.

Second semester; M. T. W. Th. F., 2:00-5:00; Professor CLARK.

26. Quantitative Analysis. (2 Hrs.) A course for students in mining engineering. Laboratory fee, $4.00.

Second semester; days to be arranged, 2:00-5:00; Professor CLARK.

7. Quantitative Analysis. (4 Hrs.) Continuation of Chemistry 6. In this course more difficult analyses will be made. Frequent reference to the literature of the subjects treated will be required. Laboratory fee, $6.00.

First semester; T. W. Th. F., 2:00-5:00; Professor CLARK, 32 S.

8. Quantitative Analysis. (5 Hrs.) Open to seniors and graduate students. This course may include the analysis of organic material, food-stuffs, etc. The work will conform to the individual needs of the student. Prerequisites: Chemistry 3 and 7. Laboratory fee, $8.00.

Second semester; 2:00-5:00; Professor CLARK, 32 S.

9. Organic Chemistry. (5 Hrs.) Required of medical students and recommended to students whose major is chemistry. Laboratory fee, $10.00.

First semester; 10:00-12:00; Professor CLARK.

20. Organic Chemistry. (5 Hrs.) A continuation of Chemistry 9. Second semester; 10:00-12:00; Professor CLARK. 30 S.

16. Organic Chemistry. (3 Hrs.) For students of agriculture, domestic science and mining engineering. Prerequisite: Chemistry 2. A combined recitation and laboratory course, following largely the plan laid down in Remsen's Organic Chemistry. Laboratory fee, $5.00.

First semester; T. Th., 9:00; laboratory, T. Th., 2:00-5:00; Professor CLARK, 23 S.

10. Physiological Chemistry. (5 Hrs.) Required of medical students. Open to graduate students. Laboratory fee, $10.00.

First semester; 10:00-12:00; Mr. MACK, 23 S.

NOTE.—In 1917 Chemistry 10 will be given in the second semester instead of in the first.

11. Quantitative Analysis. (2 Hrs.) Open to seniors and graduate students. Required of all students who select chemistry as their major subject. The course includes practice in the analysis of iron and steel, iron ores, limestone, sand, clay and other materials usually brought to the laboratory of an iron and steel works. Laboratory fee, $4.00.

First semester; T. Th., 2:00; Professor WHITEHILL, 21 S.

12. Quantitative Analysis. (2 Hrs.) Open to seniors and graduate students. Continuation of the same line of work as indicated in course 11. Laboratory fee, $4.00.

Second semester; T. Th., 2:00; Professor WHITEHILL, 21 S.

13. Chemical Preparations. (2 Hrs.) This course will include the preparation of some of the more important inorganic and organic compounds. The course is designed to meet the requirements of students who wish to take advanced work in general chemistry, or who wish to become teachers of the science. Prerequisite: Chemistry 1 and 2 or their equivalent. Laboratory fee, $3.00.

First semester; T. Th., 2:00; Professor WHITEHILL, 21 S.

14. Chemical Calculations. (2 Hrs.) This course is designed for students who wish to study the mathematical principles which are involved in chemical operations. It includes the consideration of questions involving weight and volume reactions, atomic and molecular weight determinations and the methods of calculating the results of analyses. Prerequisite: Chemistry 1 and 2 or their equivalent.

Second semester; T. Th., 2:00: Professor WHITEHILL, 21 S

19. **Industrial Chemistry.** (3 Hrs.) Open for seniors and graduates. For students whose major is chemistry or who are doing work in engineering subjects. A study of industrial processes related to chemistry. Inorganic processes and organic processes will be treated in alternate years.

Second semester; M. W. F., hours to be arranged; Professor CLARK, 30 S.

20. **Physical Chemistry.** (3 Hrs.) Lectures and laboratory work. Determination of molecular weights, solubilities, electrical conductivity, etc. Prerequisites: Chemistry 6. (Omitted 1917-18.)

First semester; M. W. F., 10:00-12:00; Mr. MACK, 23 S.

15. **Special Work.** Chemistry offers a wide field for study and investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished.

ECONOMICS, SOCIOLOGY AND COMMERCE.

Professor VICKERS, Assistant Professor WILLIS, Assistant Professor KING, and Assistant Professor BRISTOL.

Instruction in this department is designed to meet three special needs of students: (1) Training for individual efficiency in getting a living under present economic and social conditions; (2) training which will enable students to understand the existing economic and social order—whence arise many urgent problems of the time—and intelligently to discharge their duties as citizens; (3) training to prepare those so electing to continue advanced study and specialization in economics and sociology.

Economics 1 and 2 will be helpful to students in all other courses in the department, and are specified prerequisites for entrance to most of these courses. They should therefore be taken first by all students who contemplate further work in economics and sociology. Courses in sociology should, so far as practicable, be deferred till the junior and senior years. Sociology 1 is a prerequisite for all other courses in sociology except 6, 7, 8, and 10.

Economics.

1. Principles of Economics. (3 Hrs.) A general course on fundamental principles governing consumption, production, distribution and exchange of wealth. Designed to be followed by economics 2.

First semester; first section, M. W. F., 8:00; second section, M. W. F., 9:00; third section, M. W. F., 10:00; Professor VICKERS, 12 M., Assistant Professor KING, and Assistant Professor BRISTOL, 19 M.

2. Principles of Economics. (3 Hrs.) Continuation of preceding course. Prerequisite: Economics 1.

Second semester; first section, M. W. F., 8:00; second section, M. W. F., 9:00; third section, M. W. F., 10:00; Professor VICKERS, 12 M., Assistant Professor KING, and Assistant Professor BRISTOL, 19 M.

3. History of Economic Thought. (2 Hrs.) Development of economic theories from antiquity to the present time. Causes, nature and effects of changes; relation to economic and political institutions. Prerequisite: Economics 1 and 2.

First semester; T. Th., 9:00; Professor VICKERS, 12 M.

4. Relations of Government to Economic Enterprise. (2 Hrs.) Open to senior and graduate students. Functions of government, both state and municipal, in relation to economic enterprises; principles and expediency of government regulation and of government ownership; methods and results for typical enterprises. Prerequisite: consent of instructor.

First semester; T. Th., 9:00; Professor VICKERS, 12 M.

14. Distribution of Wealth. (2 Hrs.) Open to senior and graduate students. The actual apportionment of wealth among the several classes of society; effects of competition, monopoly, combinations of capital and labor, government regulation. Prerequisite: Economics 1, 2, and 3.

First semester; T. Th., 8:00; Professor VICKERS, 12 M.

5. Money, Credit and Banking. (3 Hrs.) The nature and functions of money; nature and uses of credit; functions of banks and principles of banking as revealed in the banking systems of leading countries. Special reference to the United States. Prerequisite: Economics 1 and 2.

First semester; T. Th., 11:00; and a third hour to be arranged; Professor VICKERS, 12 M.

12. Exchange. (2 Hrs.) The principles and practice of domestic and foreign exchange; method of settling international indebtedness; gold shipments; exchange rates and international distribution of specie.

Second semester; T. Th., 11:00; Assistant Professor KING.

6. Public Finance. (4 Hrs.) Principles governing expenditures of modern governments; sources of revenue; uses of public credit; principles and methods of taxation and of financial administration as revealed in fiscal systems of leading countries. Prerequisite: Economics 1 and 2.

Second semester; M. T. Th. F., 10:00; Professor VICKERS. 12 M.

7. Transportation. (3 Hrs.) Nature, history and problems of railway transportation, especially in the United States; rates, discrimination, government regulation and government ownership. Prerequisite: Economics 1 and 2.

First semester; T. Th., 10:00; and a third hour to be arranged; Assistant Professor KING.

8. Transportation. (3 Hrs.) Water transportation, inland and ocean, with special reference to the United States. Prerequisite: Economics 1 and 2.

Second semester; M. W. F., 11:00; Assistant Professor KING.

9. History of Commerce. (3 Hrs.) Nature and methods of trade among the ancients. Results of maritime discoveries, change of routes, international treaties, inventions, government regulation and trade promoting agencies.

First semester; T. Th., 11:00; and a third hour to be arranged; Assistant Professor KING.

13. Natural Resources of the United States. (3 Hrs.) The exploitation and conservation of natural resources; soils, minerals, forests, marine products; relation to distribution and activities of the people and to national development.

Second semester; T. Th., 11:00; and a third hour to be arranged; Assistant Professor KING.

10. International Trade Policies. (3 Hrs.) Nature, advantages and relative importance of trade between nations. Protective and revenue tariffs in theory and in the practice of leading nations. Special reference to the United States. Prerequisite: Economics 1 and 2.

Second semester, M. W. F., 9:00; Professor VICKERS, 12 M.

11. Labor Problems. (3 Hrs.) Origin and nature; methods of amelioration and reform; woman and child labor, sweating, immigration, unemployment, labor legislation, arbitration; cooperation, profit-sharing, insurance, industrial education. Prerequisite: Economics 1 and 2.

Second semester; M. W. F., 11:00; Professor Vickers, 12 M.

16. Insurance. (2 Hrs.) Insurance in its fundamental aspects; history; principles and their main applications; life, casualty, health, fire, marine and other hazards.

Second semester; T. Th., 8:00; Professor Vickers, 12 M.

Sociology.

1. Elements of Sociology. (3 Hrs.) A general outline of sociological doctrines with special emphasis on the origin and development of social institutions. Prerequisite: Economics 1, 2, or consent of instructor.

First semester; M. W. F., 10:00; Assistant Professor Bristol, 19 M.

11. Applied Sociology. (3 Hrs.) Continuation of preceding course. with emphasis on the application of the laws and principles of social organization and development to problems of social improvement.

Second semester; M. W. F., 10:00; Assistant Professor Bristol, 19 M.

2. Social Organization. (3 Hrs.) Laws and principles underlying social organization and activity; scope and methods of social control.

Second semester; T. Th., 8:00, and a third hour to be arranged; Assistant Professor Bristol, 19 M.

4. Theories of Social Progress. (3 Hrs.) An approach to social philosophy through biology, anthropology, psychology, history and social science by a critical and constructive study of representative writers.

First semesater; T. Th., 8:00, and a third hour to be arranged; Assistant Professor Bristol, 19 M.

6. Statistics. (3 Hrs.) The principles of statistics as a method of recording and presenting social and economic facts, with application to concrete problems. Prerequisite: Economics 1 and 2.

First semester; T. Th., 11:00; two-hour laboratory period to be arranged; Assistant Professor Bristol, 19 M.

7. Social Investigation. (3 Hrs.) Research and field work along selected lines of investigation. Prerequisite: Sociology 6.

One hour weekly, to be arranged, and not less than six hours of investigation. Second semester; Assistant Professor BRISTOL, 19 M.

8. Problems of Child Welfare. (2 Hrs.) Heritage of the child, health, home conditions, play, training, work; defective, dependent and delinquent children; institutions and movements for child saving.

Second semester; T. Th., 9:00; Assistant Professor BRISTOL, 19 M.

9. Race Problems. (2 Hrs.) History, causes and effects of immigration; methods of assimilation. The negro problem.

First semester; T. Th., 9:00; Assistant Professor BRISTOL, 19 M.

10. Rural Sociology. (3 Hrs.) A broad survey of the field of rural life in its social aspects; methods of improvement.

Second semester; M. W. F., 11:00; Assistant Professor BRISTOL, 19 M.

12. Crime and Punishment. (2 Hrs.) Theories and history of crime and punishment; causes of crime; modern methods of correction and prevention.

First semester; T. Th., 10:00; Assistant Professor BRISTOL, 19 M.

13. Scientific Philanthropy. (2 Hrs.) Causes, amelioration and prevention of poverty; philanthropic institutions, their scope, management, control, inspection.

Second semester; T. Th., 10:00; Assistant Professor BRISTOL, 19 M.

Commerce.

1. Accounting. (3 Hrs.) Elements of accounting.

First semester; M. W. F., 8:00.

Second semester; M. W. F., 8:00; Assistant Professor WILLIS, 36 L.

2. Materials of Commerce. (3 Hrs.) A study of agricultural, animal, mineral and manufactured products, their distribution and markets.

First semester; M. W. F., 9:00; Assistant Professor WILLIS, 36 L.

18. Materials of Commerce. (2 Hrs.) A continuation of commerce 2.

Second semester; T. Th., 9:00; Assistant Professor WILLIS, 36 L.

3. Cost Accounting. (3 Hrs.) Principles and methods of cost accounting. Prerequisite: Commerce 1.

Second semester; M. W. F., 9:00; Assistant Professor Willis, 36 L.

4. Corporation Administration. (3 Hrs.) A study of corporate systems, methods and advantages of corporate form, and corporation laws.

First semester; M. F., 10:00; Assistant Professor Willis, 36 L.

5. Principles of Accounting. (2 Hrs.) A general course in accounting. Prerequisite: Commerce 1.

Second semester; M. F., 10:00; Assistant Professor Willis, 36 L.

6. Corporation Procedure. (2 Hrs.) A study of the rules of procedure which govern the promotion, capitalization, consolidation, and reorganization of business corporations. Prerequisite: Commerce 4.

Second semester; T. Th., 10:00; Assistant Professor Willis, 36 L.

7. Auditing. (2 Hrs.) A study of the principles of auditing, and of the work of professional examination and oversight. Prerequisite: Commerce 1, 3, and 9.

Second semester; T. Th., 11:00; Assistant Professor Willis, 36 L.

8. Practical Banking. (3 Hrs.) A study of banking, banking laws, bank accounting, negotiable paper, duties and responsibilities of bank officials. Prerequisite: Commerce 1.

First semester; T. Th., 10:00; Assistant Professor Willis, 36 L.

9. Accounting Procedure. (3 Hrs.) A study of accounting problems, accounting systems, financial records, statements and reports. Prerequisite: Commerce 1.

First semester; T. Th., 9:00; Assistant Professor Willis, 36 L.

EDUCATION.

Professor DEAHL, Associate Professor STEELE and Assistant Professor CROW.

The courses offered in this department aim to contribute to the educational influences and to the professional efficiency of the schools of the state in the following ways: (1) To interest those students who study the science of education as a part of their general education. (2) To afford students who wish to teach for a time after graduation the means of professional training commensurate with their academic training. (3) To furnish appropriate professional education to students, and to any experienced teachers of suitable age and attainments, who may desire to fit themselves to be teachers, principals, or superintendents of schools.

Students who take education as their major and who expect to do administrative and supervisory school work should take college courses representing a wide range of subjects taught in the public schools.

Those who expect to teach education or become training teachers should indicate their desire that their course may be selected to that end.

Those who are preparing to teach academic subjects should fit themselves to give instruction in as many as three subjects.

All students whose major is education should so plan their work that the afternoons in their senior year may be open for practice teaching, or for supervisory work, or for experimental work in education.

NOTE.—For other announcements concerning education see pages 26 and 52.

1. History of Education—Early Christian, Mediaeval, and Transition to Modern. (3 Hrs.) The development of education as an institution for social service; the origin and development of the aims, subject matter, and methods of education; individual realization and social service; content and formal values in educational progress; conservative and progressive forces in educational development and retardation.

First semester; M. W. F., 8:00; Associate Professor STEELE, 16 W.

2. History of Education—Modern. (3 Hrs.) A study of the rise and development of modern educational theory; scientific, psycho-

logical, sociological, and vocational tendencies in education; the development of national, state, and city systems of schools; modern programs of studies, organization and methods.

Second semester; M. W. F., 8:00; Associate Professor Steele, 16 W.

3. History of Education—American. (2 Hrs.) Our educational inheritance from Europe and the needs it met; the development of our system of public education as a progressive response to social changes and growing needs; the evolution of modern state, city and rural systems, of modern programs of study and of methods.

Second semester; T. Th., 8:00; Associate Professor Steele, 16 W.

4. Philosophy of Education. (3 Hrs.) This course explains the process of education from the standpoint of the doctrine of evolution; the principles thus arrived at are applied from the standpoint of the history of civilization, the developing mind of the child, and the cultivation of individual and sicial efficiency.

First semester; M. W. F., 11:00; Professor Deahl, 17 W.

5. Philosophy of Education. (3 Hrs.) A continuation of Course 4.

Second semester; M. W. F., 11:00; Professor Deahl, 17 W

6. School Administration and Supervision. (2 or 3 Hrs.) Primarily for principals and superintendents of schools, and for those who are preparing for such school work. School boards, buildings and grounds, equipment, the preparation of principals and superintendents, the preparation, selection and promotion of teachers, city and rural supervision, examination and tests, grading and promoting pupils, etc.

First semester; T. Th., 11:00; Professor Deahl, 17 W.

7. School Administration and Supervision. (3 Hrs.) Open to seniors and graduate students. Continuation of course 6. Business and educational administration; the functions of the superintendent and of the principal; the improvement of teachers and teaching; meetings, institutes and associations; lesson plans, progress books and reports; the program of studies; government; books and libraries; estimating teaching and the standard of school work, etc.

Second semester; T. Th., 4:00; Professor Deahl, 17 W.

8. Foreign School Systems. (3 Hrs.) The purpose of this course is to make a comparative study of the school systems of France and Germany, together with special features of other continental systems. The practical problems will be examined from the standpoint of American education.

Second semester; hours to be arranged; Professor Deahl, 17 W.

9. School Systems, British and American. (3 Hrs.) This course deals with the development and present status of education in England, Scotland, Canada and the United States. The practical workings of the system will be emphasized. (Omitted 1917-18.)

First semester; hours to be arranged; Professor DEAHL, 17 W.

NOTE.—Courses 8 and 9 will not be given unless the number of students desiring them is considered sufficient by the instructor in charge.

10. The Principles and Art of Teaching. (3 Hrs.) Required of all students who are candidates for recommendation for teachers' certificates. Students will formulate and discuss lesson plans; do observation work, and teach regular classes; observe, so far as conditions will permit, lessons given by regular teachers, and report the same in class. Prerequisite: Education 12 or 17, and Education 4 and 5.

First semester; M. W. F., 9:00; Associate Professor STEELE, 16 W.

11. Criticism and Supervision of Instruction. (3 Hrs.) Open to seniors and graduate students. This course is planned for teachers, supervisors, principals, and superintendents of schools. Lessons will be planned and then taught with a class of pupils in the public schools of Morgantown. The lessons thus taught will be discussed in conference. The course will afford an opportunity for observation of lessons, practice teaching, and the supervision of instruction.

Second semester; M. W. F., 9:00; Associate Professor STEELE, 16 W.

17. Principles of Study. (3 Hrs.) Primarily for freshmen and sophomores. The principles of economic and successful study. The function and relation of observing, thinking, reasoning, and memorizing in study will be emphasized.

First semester; M. W. F., 10:00; Professor DEAHL, 17 W.

12. Psychology of Learning and Teaching. (3 Hrs.). The principles that control rational learning and successful teaching as far as such principles may be derived from psychological laws. The senses, sensation, perception, memory, imagination, reason, association of ideas, apperception, interest and attention, mental development, will, habit, and character.

Second semester; M. W. F., 10:00; Professor DEAHL, 17 W.

23. Educational Psychology. (2 Hrs.) The original nature of man, his reflexes, instincts and capacities as the basis of educational

growth and development; the significance of this basis in school work, in the selection of studies and in vocational and avocational pursuits; experimental determination of individual differences of school children.

First semester; T. Th., 8:00; Associate Professor STEELE, 16 W.

20. Mental Tests and Measurements. (The amount of credit will depend on the quality and quantity of work done, 2 to 6 Hrs.) Open to seniors and graduates. Mental traits and capacities of normal, retarded, and delinquent children; tests and measurements for learning and teaching; accurate standards for classifying and promoting pupils in school.

First or second semester; hours to be arranged; Professor DEAHL, 17 W.

13. Seminar. (3 Hrs.) The program of studies in elementary School.

First semester; T. Th., hours to be arranged; Associate Professor STEELE, 17 W.

14. Seminar. (3 Hrs.) Open to seniors and graduates. High schools and secondary education.

First semester; T. Th., Professor DEAHL, 17 W.

15. District Supervision. (2 or 3 Hrs.) For district and county superintendents and those preparing for such positions. The function of the rural school; the programs of studies suited to country life; the preparation of teachers; the characteristics of economic learning and successful teaching; the duties and opportunities of district supervisors; and the relations of the rural school to other agencies of education.

Second semester; T. Th., 11:00; Professor DEAHL, 17 W.

16. Agricultural Education. (3 Hrs.) Candidates for recommendation for a teacher's certificate who are registered in the College of Agriculture must take this course in place of course 10 in their senior year. (See announcements of College of Agriculture, page 212.)

Second semester; T. Th., 11:00; Professor WINKLER, 27 M.

18. The Teaching of English in Secondary Schools. (2 Hrs.) The principles underlying the teaching of English based on (1) the peculiar needs and activities of the adolescent period; (2) the subject matter; (3) the social demands in regard to English. The aims, general and specific, of English instruction; the selection of subject matter; and the method of teaching.

Second semester; T. Th., 9:00; Associate Professor STEELE, 16 W.

19. Everyday Problems in Teaching. (2 Hrs.) This evening course is planned for teachers in Morgantown and vicinity. The problems taken up are those the teachers are having to deal with in their work; the pupils; the teacher; the subject matter; the organization of the school; the method of teaching.

First semester; hours to be arranged; Associate Professor STEELE, 16 W.

21. School Sanitation and Decoration. (2 Hrs.) An evening course for teachers. Considerations determining the location and building of schoolhouses; approved architectural plans with provisions for heating, lighting and ventilating; pictures, casts and busts suitable for schoolroom decoration. The decoration of several rooms will be planned, and, as far as possible, carried out.

Second semester; hours to be arranged; Associate Professor STEELE, 16 W.

22. The Teaching of High School Subjects. (2 Hrs.) This course is concerned primarily with planning and teaching lessons under the supervision of the instructor. The teaching is followed by conference discussions. Prerequisite: Education 10 or its equivalent.

Second semester; T. Th., 10:00; Associate Professor STEELE, 16 W.

ELECTRICAL ENGINEERING.

Credit will be given in the College of Arts and Sciences for courses 51 to 56 in electrical engineering offered in the College of Engineering. For detailed announcement of these courses see page 176.

ENGLISH.

Professor Armstrong, Professor Cox, Professor Barbe, Associate Professor Smith, Associate Professor Johnson, Miss Atkeson, and Miss Pollock.

Rhetoric.

1. Composition and Rhetoric. (3 Hrs.) Primarily for freshmen. Required of all candidates for the bachelor's degrees in all the colleges. Two themes weekly, conferences, recitations on textbook, class criticism of written exercises, lectures. This course is designed to be taken in conjunction with English 26.

First semester; sections for students of the College of Engineering, M. W. F., 8:00, and M. 10:00, T. Th., 8:00; other sections M. W. F., 8:00, 9:00, 10:00 and 11:00; Professor Barbe, Associate Professors Smith and Johnson, Miss Atkeson, and Miss Pollock.

2. Composition and Rhetoric. (3 Hrs.) Primarily for freshmen. Required of all candidates for the bachelor's degrees in all the colleges. A continuation of course 1 with more attention to rules and principles. Two themes weekly; study of prose masterpieces as models of style and as material for themes; conferences, recitations, class criticism of written exercises, lectures.

Second semester; sections for students of the College of Engineering, M., 10:00, T. Th., 8:00 and M. W. F., 8:00; other sections M. W. F., 8:00, 9:00, 10:00 and 11:00; Professor Barbe, Associate Professors Smith and Johnson. Miss Atkeson, and Miss Pollock.

NOTE.—Students will not be admitted to these courses whose work shows marked deficiency in spelling, punctuation, grammar, sentence structure, or paragraphing. All four freshman English courses are prerequisites to other regular courses in English.

3. Composition and Rhetoric. (3 Hrs.) Primarily for sophomores. A continuation of courses 1 and 2 for students desiring further training in composition. Two themes weekly.

First semester; M. W. F., 9:00; Associate Professor Smith, 21 W.

4. Exposition and Argument. (3 Hrs.) A study of the general principles of these forms of composition; analysis of typical specimens of expository and argumentative literature; outlines, themes and exercises. Required of all who make English their major.

First semester; T. Th., 10:00; a third hour to be arranged; Associate Professor Johnson, 24 W.

5. Advanced Composition. (1 to 2 Hrs.) For advanced students in any department of the University. Practical forms of composition; preparation of summaries and abstracts; lecture, laboratory, and field notes; technical and business composition; preparation of reports and similar articles. Prerequisites: English 1, 2 and another course in composition of at least two hours.

First semester; F., 10:00; Associate Professor JOHNSON, 24 W.

6. Description and Narration. (3 Hrs.) A study of general principles with exercises.

Second semester; M. W. F., 9:00; Associate Professor SMITH, 21 W.

7. The Essay. (2 Hrs.) A study of the principles underlying the structure of the essay, with constant practice in their application. Prerequisites: English 1, 2, and another course in composition of at least two hours.

Second semester; T. Th., 11:00; Associate Professor SMITH, 21 W.

9. Style. (2 Hrs.) A study of the principles and elements of style; practice to develop an artistic sense in the writing of English prose. Prerequisites: English 1, 2, and another course in composition of at least two hours.

First semester; T. Th., 9:00; Associate Professor SMITH, 21 W.

10. The Letter. (2 Hrs.) Some great writers seen in their letters. A study of their use of this form of composition. Practice in writing. Prerequisites: English 1, 2, and another course in composition of at least two hours.

First semester; T. Th., 11:00; Associate Professor SMITH. 21 W.

11. The English Course in the Secondary School. (2 Hrs.) Primarily for juniors and seniors. The subject matter and management of the secondary school course in English. Required in most cases of those who make English their major.

Second semester; T. Th., 9:00; Associate Professor JOHNSON, 24 W.

12. Agricultural Journalism. (2 Hrs.) For detailed announcement, see page.....

Second semester; M. Th., 3:00; Associate Professor JOHNSON, and Mr. STOCKDALE.

13. Journalistic Composition. (1 or 2 Hrs.) Elementary exercises in newspaper reporting and in preparation of articles for newspaper or periodical publication; preparation of mss.; proofreading. The course is designed particularly for students on the editorial boards of student publications. Contributions and editorial work on these publications may be counted as part of the work of the course.

First semester; M., 3:00; Associate Professor JOHNSON. 24 W.

15. Journalistic Composition. (1 or 2 Hrs.) Continuation of course 13.

Second semester; M., 3:00; Associate Professor JOHNSON, 24 W.

14. Technical English. (1 Hr.) Primarily for seniors in the College of Engineering but open to seniors and graduate students in all the colleges. Consideration of some special problems of technical composition, preparation, criticism, and revision of student exercises, reports, theses, etc.; study of some good examples of technical literature.

Second semester; F., 10:00; Associate Professor JOHNSON, 24 W.

English Language and Literature.

The aims of this division of English are: (a) a scientific knowledge of the origin and development of the English language; (b) a general acquaintance with English literature; (c) a specific knowledge of certain great authors, periods, and movements in English literature. Freshman English is a prerequisite to other courses in literature.

20. Old English. (3 Hrs.) Not open to freshmen. Required of all students who make English their major. Bright's Anglo-Saxon Reader; the essentials of Anglo-Saxon grammar; translations.

First semester; M. W. F., 9:00; Professor COX. 32 W.

21. Old English—Beowulf. (3 Hrs.) Translations, with due attention to text, meter, literary history, etc. Prerequisite: English 20.

Second semester; M. W. F., 8:00; Professor COX, 32 W.

22. Early Middle English. (2 Hrs.) Changes in the language. Critical reading of early middle English texts. Prerequisites: English 20.

First semester; T. Th., 8:00; Professor COX, 32 W.

23. The English Language. (2 Hrs.) This course presents a general survey of the history of the English language. It will include a study of the sources of our vocabulary; the growth of the literary language; slang and legitimate speech; euphemism; folk etymology; transference of meaning; the romance of words. (Omitted in 1917-18).

Second semester; T. Th., 8:00; Professor Cox, 32 W.

24. Chaucer. The Canterbury Tales. (3 Hrs.) Required of all students who make English their major. During the first part of the semester the work will be chiefly linguistic, with interpretation of passages. The latter part of the semester will be devoted to a somewhat rapid reading, with such consideration of form, sources, etc., as are necessary to a clear understanding of what is read.

Second semester; M. W. F., 9:00; Professor Cox. 32 W.

25. Shakespeare. (3 Hrs.) Required of all students who make English their major. A critical study of three of Shakespeare's plays: Hemlet, Winter's Tale, Macbeth. Special attention will be given to exact interpretation and to those peculiarities of language in which Shakespearean usage differs from our own.

First semester; M. W. F., 11:00; Professor Cox. 32 W.

26. General Survey of English Literature. (2 Hrs.) Primarily for freshmen. Required of candidates for degrees. Historical view of English literature form its beginnings to the eighteenth century, and a close, critical study of a few classics from each of the great periods of literary development.

First semester; sections, T. Th., 8:00, 9:00, 10:00 and 11:00; Professors ARMSTRONG, COX, and BARBE, Miss ATKESON and Miss POLLOCK.

27. General Survey of English Literature. (2 Hrs.) Primarily for freshmen. Required of candidates for degrees. A continuation of English 26. A survey of English literature in the eighteenth and nineteenth centuries. Prerequisites: English 1 and 26.

Second semester; sections, T. Th., 8:00, 9:00, 10:00 and 11:00; Professors ARMSTRONG, COX, and BARBE, Miss ATKESON and Miss POLLOCK.

NOTE.—The schedule is so arranged that courses 26 and 27 can be taken in connection with English 1 and 2, in order to make up five hours of freshman English required in each semester.

28. Shakespeare. (3 Hrs.) Required of all students who make English their major. One play will be studied closely and critically,

and a number of others will be read with attention to characters, plot development, and general literary interpretation.

Second semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

29. Milton. (2 Hrs.) This course will consider Milton's poems and the Areopagitica. Interpretation of passages; consideration of forms, sources, style, etc.; lectures.

Second semester; T. Th., 8:00; Professor COX, 32 W.

30. The Elizabethan Period. (2 Hrs.) From Tottel's Miscellany to the death of Spenser (1557-1599). The authors studied are Wyatt, Surrey, Ascham, Lily, Sidney, Marlowe, and Spenser. (Omitted in 1917-18).

First semester; T. Th., 8:00; Professor COX, 32 W.

31. The Queen Anne Period. (3 Hrs.) The course will deal with those writers who are specially representative of the classical spirit in English literature. The authors studied are Dryden, Swift, Addison, Steel, DeFoe, Pope, and Gay.

Second semester; M. W. F., 11:00; Professor COX, 32 W.

32. English Literature. (3 Hrs.) From the death of Swift to the publication of the Lyrical Ballads (1745-1798). The authors studied are Gray, Collins, Johnson, Goldsmith, Cowper, Sheridan, Burke, Burns, and Blake, with some attention to lesser authors.

First semester; M. W. F., 8:00; Professor BARBE, 33 W.

33. English Literature. (3 Hrs.) From the publication of Lyrical Ballads to the death of Scott (1798-1832). The authors studied are Wordsworth, Byron, Shelley, Keats, and Scott. (Omitted 1917-18).

First semester; M. W. F., 11:00; Professor ARMSTRONG, 31 W.

34. English Literature. (3 Hrs.) From the death of Scott to the death of Tennyson (1832-1892). Tennyson, Browning, and the other important poets of the period.

Second semester; M. W. F., 8:00; Professor ARMSTRONG, 31 W.

36. The English Old Testament. (3 Hrs.) Required of all students who make English their major. A study of the Old Testament in English as literature; discussion of its literary forms and interpretation of some of its masterpieces.

First semester; M. W. F., 9:00; Professor ARMSTRONG, 31 W.

37. **The English New Testament.** (2 Hrs.) A study of the New Testament in English as literature. All the books will be read and a few studied with attention to literary form and interpretation.

Second semester; T. Th., 10:00; Professor ARMSTRONG, 31 W.

38. **The Short Story.** (3 Hrs.) The short story as a form of literature. A study of its development and some of its types from Poe to the present time.

First semester; M. W. F., 11:00; Professor ARMSTRONG, 31 W.

39. **American Literature Since 1870.** (2 Hrs.) A study of recent and contemporary work in American literature. The course will deal with such men as Mark Twain, Howells, Aldrich, Norris, Riley, Field, Herrick, Moody, and Frost. (Omitted in 1917-18).

First semester; T. Th., 10:00; Professor ARMSTRONG, 31 W.

40. **The Novel.** (3 Hrs.) The study in this course will include the historical development of the novel; its significance; relation to modern life; types; tendencies; reading of novels, reports; lectures. (Omitted in 1917-18).

Second semester; M. W. F., 11:00; Professor COX, 32 W.

42. **English Literature.** (3 Hrs.) Study of an author. The entire production or the most important work of some selected author will be studied to gain a complete view. (Omitted in 1917-18).

Second semester; M. W. F., 8:00; Professor ARMSTRONG, 31 W.

43. **Types of American Fiction.** (2 Hrs.) A study of a few examples of the main types of American fiction.

Second semester; T. Th., 10:00; Professor ARMSTRONG, 31 W.

44. **Mid-Victorian Poetry.** (2 Hrs.) A study of the poetry of Matthew Arnold, Dante Gabriel Rossetti, and William Morris, and of the relation of these writers to the spirit of their time.

First semester; T. Th., 9:00; Professor BARBE, 33 W.

45. **Problems in the Interpretation of Literature.** (2 Hrs.) Intended especially for teachers but elective for sophomores, juniors, and seniors in the University. The course will deal with the principles of literary criticism; special assignments in reading; reports; lectures.

First semester; T. Th., 4:00; Professor COX, 32 W.

46. A Study of Poetry. (2 Hrs.) A discussion of metrical and rhythmical forms and of theories of English verse; the essential qualities and historical development of English poetry. The course will include a study of typical poems of the several periods to illustrate forms, principles, and theories.

Second semester; T. Th., 9:00; Professor Barbe, 33 W.

47. Wordsworth. (3 Hrs.) A study of the poetry of Wordsworth. (Omitted in 1917-18).

Second semester; M. W. F., 4:00: Professor Barbe, 33 W.

48. The Ballad. (2 Hrs.) The traditional English and Scottish ballads with a special consideration of the types found in West Virginia; other phases of folk-lore, such as old songs, negro melodies and "spirituals," legends, superstitions, singing games, etc. Elective for juniors, seniors, and graduate students. (Omitted in 1917-18).

Second semester: T. Th., 8:00; Professor Cox, 32 W.

49. Bible Stories. (1 Hr.) The object of this course is to present those Bible characters and incidents which every well-informed person should know. The work will consist of lectures, story-telling, assigned readings, and reports.

First semester: F., 10:00: Professor Armstrong, 31 W.

50. Current Periodical Literature. (1 Hr.) The object of the course is to encourage students to read some of the best poems, essays, and short stories appearing in American periodicals of the first class. The work of the course will consist of lectures, assigned readings, reports, and discussions.

First semester; M., 10:00.

Second semester (if there is sufficient demand); M., 10:00; Professor Armstrong, 31 W.

51. Browning. (3 Hrs.) A study of the poetry of Robert Browning.

Second semester; M. W. F., 4:00; Professor Barbe, 33 W.

ENTOMOLOGY.

Professor PEAIRS.

1. General Entomology. (4 Hrs.) A study of the external structures, classification, habits, and local distribution of insects and their near relatives. Lectures and text-book. Laboratory and field work in the collecting and mounting of the more common local insects, the classification of the insects, and the study, aided by dissections and drawings, of the external anatomy of various types.

Second semester; M. W. F., 11:00; Th., 2:00, A.

Credit will also be given in the College of Arts and Sciences for courses 2, 3, 4, 5, 6, and 9 in entomology offered in the College of Agriculture. For detailed announcement of these courses see page 220.

FARM MANAGEMENT.

Associate Professor DADISMAN

2. Rural Economics. (3 Hrs.) The study of economics as related to all phases of rural life.

Second semester; M. W. F., 9:00.

Credit will also be given in the College of Arts and Sciences for course 1 in farm management offered in the College of Agriculture. For detailed announcement of this course see page 221.

FRENCH.

For announcement of courses in French see Romance Languages, page 133.

GEOLOGY AND MINERALOGY.

Professor Brown and Assistant Professor Price.

2. General Geology. (3 Hrs.) Designed for sophomores and juniors. Required of students in civil and mining engineering. Surface features, stratigraphy, and structural geology. Numerous excursions will be taken. Text-book, Schuchert and Pirrson. Prerequisite: Some knowledge of chemistry.

First semester; first section, M. W. F., 11:00; Professor Brown, 111 M. H.; second section, M. W. F., 10:00; Assistant Professor Price, 113 M. H.

3. Historical Geology. (4 Hrs.) Designed for juniors and seniors. A continuation of Geology 2. The progress and development of plants and animals through the different ages of the earth. Laboratory work. Text-book, Schuchert and Pirrson. Prerequisite: Geology 2, some knowledge of botany and zoology. Laboratory fee, $2.00.

Second semester; M. W. F., 10:00; laboratory, W., 2:00; Assistant Professor Price, 111 M. H.

4. Economic Geology. (3 Hrs.) Designed for juniors and seniors. Required of students in civil and mining engineering. This course treats of the occurrence and distribution of the non-metallic minerals, with attention to the geology of coal, oil and gas. Text-book, Ries' Economic Geology. Prerequisite: Geology 2 or 6.

Second semester; M. W. F., 11:00; Assistant Professor Price, 111 M. H.

5. Economic Geology. (3 Hrs.) Designed for juniors and seniors. A continuation of course 4. An account of the occurrence of ore deposits and the distribution of metallic minerals. Text-book, Ries. Prerequisite: Geology 2, or Geology 6.

Second semester; M. W. F., 10:00; Professor Brown, 113 M. H.

6. General Mineralogy. (5 Hrs.) Designed for freshmen and sophomores. Required of students in mining engineering. The principles of crystallography, physical and chemical properties, formation, uses and determination of the more important minerals. Text-book, Moses and Parsons' Mineralogy. Prerequisites: Trigonometry and some knowledge of chemistry and physics.

First semester; 8:00; Professor Brown, 113 M. H.

7. Determinative Mineralogy. (5 Hrs.) Continuation of course 6. Required of students in mining engineering. This course consists of work in determining minerals and making precise measurements with reflecting goniometer. Text-book, Moses and Parsons. Prerequisites: Geology 6, some knowledge of chemistry and physics.

Second semester; 8:00; Professor BROWN. 113 M. H.

8. Geology of West Virginia. (2 Hrs.) Designed for seniors and especially for teachers in high schools. This course is a physical history of the state and an account of its economic resources. Prerequisite: Geology 2.

First semester; T. Th., 11:00; Professor BROWN. 111 M. H.

10. Petrology and Building Stones. (2 Hrs.) A study of rocks with about 400 specimens of the various types from many countries. Adapted to the needs of engineers and architects.

First semester; T. Th., 11:00; Professor BROWN. 111 M. H.

11. Physical Geography. (3 Hrs.) This course treats of the surface of the earth, its form, and the forces in action, with their effect on the life upon it. Designed especially for those who wish to teach physically geography. Outdoor trips.

First semester; M. W. F., 8:00; Assistant Professor PRICE. 111 M. H.

12. Methods in Paleontology. (2 Hrs.) A practical course in the methods of collecting, preparing, preserving and classifying invertebrate fossils. Prerequisite: Geology 3 or Zoology 1. Text-book, Shimer. Laboratory fee to cover cost of materials used, not to exceed $3.00.

Hours to be arranged; Assistant Professor PRICE, 112 M. H.

13. Oil and Gas Geology. (2 Hrs.) Designed for seniors. Required of students in mining engineering, oil and gas option. The origin, properties, distribution and mode of accumulation of oil and gas; reservoirs of oil and gas; location of wells; field methods. Text-book, Johnson and Huntley. Prerequisites: Geology 2 and 3, trigonometry, and some knowledge of chemistry and physics.

First semester; T. Th., 8:00; Assistant Professor PRICE. 111 M. H.

14. Oil and Gas Literature. (1 Hr.) Designed for seniors. Required of students in mining engineering, oil and gas option. A survey of scientific and technical literature bearing on the geology and

production of oil and gas, including current journals, government and state publications. Prerequisites: Geology 2 and 3, trigonometry and some knowledge of chemistry and physics.

First semester; hours to be arranged; Assistant Professor PRICE, 112 M. H.

92. Oil and Gas Production. (2 Hrs.) For detailed announcement of this course offered in the Department of Mining Engineering see page 181.

Second semester; hours to be arranged; Assistant Professor PRICE.

Excursions are taken by the classes over the outcrop of the Coal Measures and through the western fold of the Appalachian mountains, giving, within a radius of seven miles of the University, a complete geological section through the Mississippian and Pennsylvanian (Coal Measures) systems. Producing oil and gas wells are situated within ten miles of the University.

GERMANIC LANGUAGES AND LITERATURES.

Professor TRUSCOTT and Mr. GRANTHAM.

1. **Elementary German.** (5 Hrs.) Pronunciation, grammar, reading of simple prose. Vos's or Thomas's Grammar; Super's Reader; Grimm's Maerchen.

First semester; section 1, 9:00; section 2, 11:00; Mr. GRANTHAM, 19 W.

2. **Elementary German.** (5 Hrs.) Continuation of course 1. Reading, dictation, elementary composition. Immensee; Hoeher als die Kirche; Holzwarth's "Gruss aus Deutschland;" Truscott and Smith's "Elementary German Composition."

Second semester; section 1, 9:00; section 2, 11:00; Mr. GRANTHAM, 19 W.

3. **German Prose and Composition.** (5 Hrs.) Reading of prose by modern authors; translation of English into German; grammar; dictation. Truscott and Smith's "Elementary German Composition."

First semester; 8:00; Mr. GRANTHAM.

4. **German Poetry and Composition.** (5 Hrs.) One long poem and one drama; well known short poems. The work in composition will be a continuation of that in course 3. "Hermann und Dorothea"; "Wilhelm Tell"; Hatfield's "German Lyrics and Ballads.'

Second semester; 8:00; Mr. GRANTHAM, 19 W.

5. **Germany and the Germans.** (3 Hrs.) A course of general information about the country and the people. Aus vergangener Zeit; Lodemann's Germany and the Germans; Tower's Germany of Today; Boles's Deutsche Wirtschaft.

First semester; M. W. F., 8:00; Professor TRUSCOTT, 18 W.

6. **Advanced Composition.** (2 Hrs.) Translation; dictation; grammar. Bronson's Colloquial German; Osthaus's Prose Composition.

First semester; T. Th., 8:00; Professor TRUSCOTT, 18 W.

7. **Romantic Period.** (3 Hrs.) Reading selected from the prose and poetry of the first half of the nineteenth century. Prose by Arnim, Fouque, Chamisso, Eichendorff, and Immermann. Poetry by Heine, Platen, Schenkendorf, Rueckert and Uhland. This course is intended to follow course 5.

Second semester; M. W. F., 8:00; Professor TRUSCOTT, 18 W.

8. Advanced Composition. (2 Hrs.) A continuation of course 6. Jagemann's German Composition.

Second semester; T. Th., 8:00; Professor TRUSCOTT. 18 W.

9. Schiller. (3 Hrs.) Study of his life. Gedichte; selections from "Geschichte des dreissigjaehrigen Krieges;" "Wallenstein."

First semester; M. W. F., 9:00; Professor TRUSCOTT, 18 W.

10. Goethe. (3 Hrs.) Study of his life. Gedichte; Werther's Leiden; Torquato Tasso; Faust, Part I.

Second semester; M. W. F., 9:00; Professor TRUSCOTT, 18 W.

11. History of German Literature. (3 Hrs.) Open to seniors and graduate students. The history of the literature to 1748; reading and discussion of works representative of the most important authors and periods. As a hand-book Kluge's Geschichte der deutschen Nationalliteratur will be used.

First semester; M. W. F., 10:00; Professor TRUSCOTT, 18 W.

12. History of German Literature. (3 Hrs.) Open to seniors and graduate students. A continuation of course 11. The history of the literature from 1748 to 1900.

Second semester; M. W. F., 10:00; Professor TRUSCOTT. 18 W.

13. Lessing. (3 Hrs.) Open to seniors and graduate students. Study of his life. Minna von Barnhelm; Emilia Galotti; Nathan der Weise. Laocoon. (Omitted in 1917-18).

First semester; hours to be arranged; Professor TRUSCOTT, 18 W.

15. Modern German Drama. (2 Hrs.) A reading course. The classical works of Goethe and Schiller are not considered. Prerequisites: Courses 1, 2, 3, 4, and 5. (Omitted in 1917-18).

First semester; T. Th., 9:00; Professor TRUSCOTT, 18 W.

16. Modern German Drama. (2 Hrs.) A continuation of course 15. (Omitted in 1917-18).

Second semester; T. Th., 9:00: Professor TRUSCOTT, 18 W.

17. German Novel and Short Story. (2 Hrs.) A reading course in nineteenth century prose. Prerequisites: Courses 1, 2, 3, 4, and 5.

First semester; T. Th., 9:00; Professor TRUSCOTT. 18 W.

18. German Novel and Short Story. (2 Hrs.) A continuation of course 17.

Second semester; T. Th., 9:00; Professor Truscott, 18 W.

19. Scientific German. (3 Hrs.) Intended for students in the scientific courses. Prerequisites: Courses 1, 2, 3, and 4.

First semester; M. W. F., 11:00; Professor Truscott, 18 W.

22. Scientific German. (3 Hrs.) Continuation of course 19.

Second semester; M. W. F., 11:00; Professor Truscott, 18 W.

21. Special Topics in German Grammar. (No credit.) For students who intend to teach German. Discussion of text-books. Registration conditional with the instructor.

Second semester; hours to be arranged; Professor Truscott, 18 W.

GREEK.

Professor Bishop.

1. Elementary Greek. (5 Hrs.) White's Beginning Book. Greek Boy at Home.
First semester; 11:00; 23 W.

2. Elementary Greek. (5 Hrs.) White's Beginning Book continued; Xenophon's Anabasis. Greek Boy at Home.
Second semester; 11:00; 23 W.

3. Xenophon's Anabasis. (4 Hrs.) Original exercises based on text read.
First semester; M. T. Th. F., 10:00; 23 W.

4. Selections from Lucian—Homer's Odyssey. (4 Hrs.) Goodwin's and Monroe's Grammars; original exercises.
Second semester; hours to be arranged; 23 W.

5. Attic Orators. (4 Hrs.) Jebb's Selections from the Attic Orators; Goodwin's Grammar; original exercises. (Omitted in 1917-18).
First semester; hours to be arranged; 23 W.

6. Tales from Herodotus. Homer's Odyssey. (4 Hrs.) Goodwin's Grammar; original exercises. (Omitted in 1917-18).
Second semester; hours to be arranged; 23 W.

7. Plato's Apology, Krito, and Euthyphro. (3 Hrs.) Hadley-Allen's Grammar; original exercises; Wright's History of the Greek Literature, for reference.
First semester; M. W. F., 9:00; 23 W.

8. Demosthenes "On the Crown." (3 Hrs.) Hadley-Allen's Grammar; original exercises; Wright's History of the Greek Literature, for reference.
Second semester; M. W. F., 9:00; 23 W.

9. Xenophon's Memorabilia. (3 Hrs.) Hadley-Allen's Grammar; original exercises; Wright's History of the Greek Literature. (Omitted in 1917-18).
First semester; M. W. F., 9:00; 23 W.

10. Herodotus. (3 Hrs.) Hadley-Allen's Grammar; original exercises. (Omitted in 1917-18).
Second semester; M. W. F., 9:00; 23 W.

11. Thucydides. (3 Hrs.) Goodwin's Moods and Tenses; Gildersleeve's Syntax; Wright's History of Greek Literature for reference.
First semester; hours to be arranged; 23 W.

12. Aeschylus' Prometheus Bound. (3 Hrs.) Open to seniors and graduate students. Goodwin's Moods and Tenses; Gildersleeve's Syntax. (Omitted in 1917-18).
Second semester; hours to be arranged; 23 W.

13. Sophocles' Oedipus Rex. (3 Hrs.) Open to seniors and graduate students. Goodwin's Moods and Tenses; Gildersleeve's Syntax. (Omitted in 1917-18).
First semester; hours to be arranged; 23 W.

14. Euripides' Ion. (3 Hrs.) Open to seniors and graduate students. Goodwin's Moods and Tenses; Gildersleeve's Syntax.
Second semester; hours to be arranged; 23 W.

15. Greek Literature in Translation. (2 Hrs.) Wright's History of Greek Literature.
First semester; T. Th., 9:00; 23 W.

16. Greek Life and Religion. (2 Hrs.) Greek religion; home life of the Greeks; Greek archaeology.
Second semester; T. Th., 9:00; 23 W.

20. Greek Mythology. (2 Hrs.)
First semester; M. F., 9:00; 23 W.

NOTE.—Courses 15, 16, and 20 are especially recommended to students of English, as no knowledge of Greek is a prerequisite.

17. The New Testament in Greek. (3 Hrs.) Selected portions of the Gospels read, as circumstances may direct.
Second semester; hours to be arranged; 23 W.

18. The New Testament in Greek. (3 Hrs.) Selected portions of the Acts and of the Epistles read, as circumstances may direct.
First semester; hours to be arranged; 23 W.

19. Comparative Philology of the Aryan Family. (2 Hrs.)
First semester; T. Th., 3:00; 23 W.

HISTORY AND POLITICAL SCIENCE.

Professor CALLAHAN, Professor CHITWOOD, and Mr. HIGBY.

The work offered in this department includes: (1) Continental European History, (2) English History, (3) American History, and (4) Political Science.

Instruction is given by lectures, text-book work, assigned collateral readings; preparation of papers, syllabi, and maps; special reports, recitations, and informal conferences.

Students are encouraged to observe and to read contemporary history and politics.

An afternoon hour is designated for conferences and for direction of library work.

Continental European History.

Students who select continental European history as their principal study are advised to take at least one year in French or German, in the early part of the University course.

Among the books of reference, which every student will often need to consult, are Ploetz's Epitome of Universal History and some good historical atlas, such as Shepherd's Historical Atlas, or Dow's Atlas of European History.

11. History of Rome. (3 Hrs.) Open to freshmen. The aim of this course is to trace the development of Roman institutions, character, and civilization, to explain the genius of the Roman people for organization and government, and to call attention to the contributions of Rome to modern civilization.

Second semester; M. W. F., 8:00; Professor CHITWOOD, 21 L.

12. Mediaeval History. (3 Hrs.) Primarily for freshmen. This course begins with the period of institutional chaos following the break up of the Roman empire, and ends with the rise of modern states. Political history, except in the case of France, is subordinated to the study of social and economic institutions.

First semester; M. W. F., 8:00 and M. W. F., 9:00; Mr. HIGBY, 20 L.

14. Modern European History. (3 Hrs.) Primarily for freshmen. The Reformation and the religious wars, the revolt of the Netherlands and the rise of the Dutch republic, the rise of Prussia, the period of French ascendency, the revolutionary and Napoleonic eras, the period

of reaction, the unification of Germany and Italy, and the progress of democracy in the nineteenth century.

Second semester; M. W. F., 8:00; and M. W. F., 9:00; Mr. HIGBY, 20 L.

13. The Renaissance and the Reformation; 1300-1648. (3 Hrs.) The development of the forces of modern civilization; survey of the economic, political, and intellectual conditions at the close of the middle ages; the Renaissance in Italy and Germany; the Protestant revolution in the principal European states; the counter-reformation; and the religious wars to the Treaty of Westphalia. (Omitted in 1917-18).

First semester; M. W. F., 11:00; Professor CHITWOOD, 20 L.

15. Continental Europe in the Nineteenth Century. (3 Hours). Open only to seniors and graduate students. This course is devoted to an intensive study of political and social conditions in the more important states of Europe during the last hundred years. The results of extended reading are presented in the form of papers and reports.

Second semester; M. W. F., 11:00; Professor CHITWOOD, 20 L.

16. Seminar in European History. (2 Hrs.) For graduates only.

44. The French Revolution and Napoleonic Era. (3 Hrs.) A survey of the facts of European History from 1648 to 1789, with emphasis on the causes of the French Revolution; and an intensive study of the great political, social and military movements from 1789 to 1815.

Second semester; M. W. F., 11:00; Mr. HIGBY, 20 L.

45. Current European History. (1 Hr.) A study of current history and politics in Europe and the East.

First semester; T., 8:00; Mr. HIGBY. 20 L.

Second semester; T., 11:00; Professor CHITWOOD. 20 L.

46. Expansion of Europe, 1500-1914. (3 Hrs.) An advanced course tracing the expansion of European people into Asia, Africa and America, and the effects of the expansion on Europe.

Second semester; M. W. F., 11:00; Mr. HIGBY. 20 L.

English History.

Students will find it convenient to own Low and Pulling's Dictionary of English History and Gardiner's Atlas.

Courses 17 and 18 or 19 and 20 furnish a good foundation for the study of American history and law.

17. History of England to the Tudors. (3 Hrs.) Open to freshmen. A course in the general and institutional history of England. Special attention is given to political, economic, and social life and development; the more important subjects in constitutional history are considered, showing how England learned to govern herself.

First semester; M. W. F., 10:00; Mr. Higby, 21 L.

18. History of England from the Tudors to the Present Time. (3 Hrs.) A continuation of course 17. The upbuilding of the British empire; constitutional and religious struggles of the sixteenth and seventeenth centuries; economics and social changes; international relations; struggle for colonial and commercial supremacy; and the formation of modern conditions and institutions.

Second semester; M. W. F., 10:00; Mr. Higby, 21 L.

19. English Social and Industrial History. (3 Hrs.) A survey of the facts of social and industrial evolution and their relation to political history and the interpretation of present conditions; a study of the enlargement of English life and the growth of English institutions.

First semester; M. W. F., 11:00; Mr. Higby, 21 L.

20. English Historical and Practical Politics: English Constitutional Law and History. (2 Hrs.) A seminar course arranged especially for advanced students in history who desire a suitable preparation for courses in American government and law. Prerequisite: a general outline knowledge of English history and course 17, 18 or 19. (Omitted 1916-17).

First semester; T. Th., 11:00; Professor Callahan, 30 W.

American History.

All students of American history should have Channing and Hart's Guide, and Shepherd's Historical Atlas.

21. American Colonial History (1492-1776). (2 Hrs.) Primarily for freshmen. European back-ground; discovery and settlement; growth of the English colonies; the Anglo-French colonial conflict; adaptation of European civilization to American conditions and development of new institutions; relation of the colonies to England; and the separation.

First semester; T. Th., 9:00; Mr. HIGBY. 21 L.

Second semester; T. Th., 8:00; Professor CHITWOOD. 21 L.

22. The Formation of the Union: American Political History 1776-1829. (3 Hrs.) Primarily for freshmen preparing for law. Special attention is given to political and constitutional development and to international relations, but industrial and social growth is also treated.

First semester; M. W. F., 9:00; Professor CALLAHAN, 21 L.

23. Division and Reunion: American Political History Since 1829. (3 Hrs.) Primarily for freshmen preparing for law. The growth of sectional differences, culminating in the secession movement; the Civil War; progress since the War; development of resources and readjustment; a brief survey of the political and social questions of the country

Second semester; M. W. F., 9:00; Professor CALLAHAN, 21 L.

In courses 21, 22 and 23, while special emphasis is laid on political and constitutional history, must attention is given to social and economic conditions.

25. American Expansion Policy. (2 Hrs.) For graduate students.

26. History of American Diplomacy and Foreign Policy (1776-1909). (2 Hrs.) Open to seniors and graduate students who have credit for History 22 and 23. The fundamental principles of American policy; a study of the most important phases of American international relations; America's influence on international law and diplomacy; the state department and its most distinguished secretaries.

Second semester; T. Th., 11:00; Professor CALLAHAN. 21 L.

29. American Social and Economic History. (3 Hrs.) Primarily for freshmen. This course furnishes a proper basis for college courses in American history and economics. Beginning with the European conditions which led to exploration and colonization, the student traces the chief factors in American growth and expansion from simple agricultural communities to the complex industrial and commercial organization of today.

Second semester; M. W. F., 11:00; Professors CALLAHAN and CHITWOOD, 21 L.

31. Latin-American History. The chief factors and phases of the development of the Latin-American countries from the era of settlement to the present time, with emphasis upon their recent diplomatic relations (especially inter-American). Effort will be made to understand the problems now before the Latin-American states. (A knowledge of Spanish will be useful in this course).

Second semester; T. Th., 9:00; Professor CALLAHAN, 21 L.

32. History of West Virginia. (1 Hr.) A general course in social, industrial and political development. Considerable attention is given to railroad development and the growth of towns. Designed primarily for freshmen.

First semester; Th., 10:00; Professor CALLAHAN, 21 L.

34. Seminar in American History. (2 Hrs.) A research course supplemented by lectures. Primarily for graduate students taking history as their major. Proper attention is given to scientific methods of historical research, construction, and interpretation. Theses in American history are prepared in connection with this work.

Second semester; T., 10:00; Professor CALLAHAN, 22 L.

The attention of students taking American History is invited to the announcements of the Bryan prize and the Tax Commission prize on page 50.

Political Science.

In all these courses, students should have a clear knowledge of the outlines of general history and especially of modern political history.

35. American Practical Politics: Government at Work. (2 Hrs.) A practical study of the actual workings of the government and politics of the United States, both state and national. Special attention is given to the realities of government and institutions, and to the personal interest and personal action which underlie constitutions and statutes. Open to students who have a familiar knowledge of the period covered by courses 22 and 23.

First semester; T. Th., 11:00; Professor CALLAHAN, 21 L.

36. European Historical and Practical Politics. (2 Hrs.) The development of the political institutions, constitutional governments, and parties of the leading countries of modern continental Europe; recent European politics. Open to advanced students who have had thorough courses in European history, especially course 14.

Second semester; T. Th., 8:00; Professor CHITWOOD, 20 L.

40. Municipal Government. (2 Hrs.) Second semester.

42. Anglo-American Historical Jurisprudence. (2 Hrs.) Open to seniors and graduate students. A study of the sources and growth of law and the development of legal institutions in connection with social and political history. Adapted especially to advanced students of history who are preparing for the study of law. (Omitted in 1917-18).

First semester; T. Th., 11:00; Professor CALLAHAN, 21 L.

43. International Law and Practice of Diplomacy. (2 Hrs.) Open to seniors and graduate students with a knowledge of modern history, especially courses 22 and 23.

Second semester; T. Th., 11:00; Professor CALLAHAN, 21 L.

HOME ECONOMICS.

Associate Professor COLWELL, Miss OLIVER, and Miss NUZUM.

1. Selection and Preparation of Food. (4 Hrs.) It is recommended that Chemistry 1 and 2 precede or parallel this course. Laboratory fee, $2.00.

First semester; T. Th., 9:00; laboratory sections (limited to twenty students each) for students of agriculture, T. Th., 10:00-12:00; for advanced students, M. W., 2:00; other sections, T. Th., 2:00; Associate Professor COLWELL, Miss NUZUM and Assistant, 2 W.

2. Selection and Preparation of Food. (4 Hrs.) Continuation of course 1. Prerequisite: same as in course 1. Laboratory fee, $2.00.

Second semester; T. Th., 9:00; laboratory sections (limited to twenty students each) for students of College of Agriculture, T. Th., 10:00-12:00; for advanced students, M. W., 2:00; other sections, T. Th., 2:00; Associate Professor COLWELL, Miss NUZUM and Assistant, 2 W.

31. Selection and Preparation of Food. (3 Hrs.) Similar to course 1.

First semester; T. Th., 9:00; laboratory section, F., 2:00; Associate Professor COLWELL, Miss NUZUM and Assistant, 2 W.

32. Selection and Preparation of Food. (3 Hrs.) Similar to course 2. Laboratory fee, $1.50.

Second semester; T. Th., 9:00; laboratory section, F., 2:00; Associate Professor COLWELL, Miss NUZUM and Assistant, 2 W.

3. Hygiene. (2 Hrs.) Open to all students. (Omitted 1917-18).

First semester; M. F., 10:00; Associate Professor COLWELL, 2 W.

9. Hygiene of the Family Group. (2 Hrs.) Prerequisite: course 3.

Second semester; M. F., 10:00; Associate Professor COLWELL and Assistant, 2 W.

21. Home Cookery. (3 Hrs.) Prerequisite: Home economics 1 and 2. Laboratory fee, $3.00.

First semester; Th., 11:00; laboratory, W., 11:00-1:00; F., 10:00-12:00; Associate Professor COLWELL and Miss NUZUM, 1 W.

Second semester (by arrangement with instructors before registration); Associate Professor COLWELL and Miss NUZUM, 1 W.

20. Home Cookery. (2 Hrs.) Continuation of course 21. Prerequisite: Home economics 1 and 2. Laboratory fee, $3.00.

Second semester; Th., 11:00; laboratory, W., 11:00-1:00; F., 10:00-12:00; Associate Professor COLWELL and Miss NUZUM, 2 W.

22. Demonstrations. Prerequisite: Home economics 1 and 2. Laboratory fee, $1.00.

First semester; T. Th., 4:00; Miss NUZUM, 2 W.

23. Demonstrations. Continuation of course 22. Prerequisite: Home economics 1 and 2. Laboratory fee, $1.00.

Second semester; T. Th., 4:00; Miss NUZUM, 2 W.

24. Dietetics. (2 Hrs.) Prerequisite: Home economics 1 and 2. Parallel course; Home economics 21. Laboratory fee, $2.00.

First semester; T., 11:00; laboratory, M., 10:00-12:00; Associate Professor COLWELL, 2 W.

25. Dietetics. (3 Hrs.) Prerequisite: Chemistry 16, home economics 1, 2, 21, and 24.

Second semester; T. Th., 11:00; laboratory, M., 10:00-12:00; Associate Professor COLWELL, 2 W.

26. Home Economics in Public Schools. (2 Hrs.) Parallel course: Education 10. Prerequisite: all other required home economics courses.

First semester; T. Th., 10:00; Associate Professor COLWELL, 2 W.

27. Teachers' Course in Home Economics. (3 Hrs.) Prerequisite: Home economics 26.

Second semester; M. W. F., 9:00; Associate Professor COLWELL, 9 W.

8. Special Problems. (4 Hrs.) Open to juniors and seniors. Thesis course. Prerequisites: Home economics 1, 2, and 4; Chemistry 1 and 2; Botany 1 and 2, or Zoology 1.

Second semester; M. W., 9:00; laboratory, T. Th., 1:15; Associate Professor COLWELL, 2 W.

11. Applied Design. (3 Hrs.)

First semester; laboratory section for major students; M. W. F., 1:30; other section, T. Th., 1:30; S., 9:30; Miss OLIVER, 8 W.

12. Textiles. (3 Hrs.)
First semester; M. F., 9:00; laboratory, M., 8:00-10:00; Miss .....

13. Sewing. (3 Hrs.)
Second semester; M. W. F., 8:00-10:00; for students in College of Agriculture, T. Th., 2:00; S., 9:00; Miss.....

43. Sewing. (4 Hrs.) Similar to course 13, for those students who do not offer sewing for entrance.
Second semester; M. W. F., 2:00; S., 9:00; Miss OLIVER. 8 W.

14. Home Decorations. (3 Hrs.)
Second semester; M. W. F., 8:00-10:00; for students in College of Agriculture, M. W. F., 2:00; Miss OLIVER. 8 W.

15. Textiles. (3 Hrs.)
Second semester; M., 9:00; F., 8:00-10:00; Miss.....

16. Costume Designing. (2 Hrs.)
First semester; T. Th., 10:00-12:00; Miss OLIVER, 8 W.

17. Garment Construction. (3 Hrs.)
Second semester; M. W. F., 10:00-12:00; Miss OLIVER, 8 W.

18. Home Planning. (3 Hrs.)
First semester; M. W. F., 10:00-12:00; Miss OLIVER, 8 W.

19. Modern and Period Furnishings. (2 Hrs.)
Second semester; T. Th., 10:00-12:00; Miss OLIVER, 8 W.

HORTICULTURE.

Credit will be given in the College of Arts and Sciences for courses 2, 3, and 13 in horticulture offered in the College of Agriculture. For detailed announcements of these courses see page 222.

ITALIAN.

For courses in this subject see under Romance Languages, page 136.

LATIN.

Professor CANNADAY and Professor HARE

Courses 1, 2, 3, and 4 may be offered for entrance or taken as college work. Students offering two units for entrance will begin with 1; those offering three units will begin with 3, and those offering four units with 5. Additional courses are required of those making Latin their major, depending on the amount offered for entrance. Students making Latin their major will also take History 10 and 11. See page 105.

1. Cicero. (4 Hrs., or if offered to remove entrance conditions, one-half unit.) Primarily for freshmen offering two units for entrance. The first three orations against Catiline are read. Prerequisite: two units of high school Latin.

First semester; 8:00; Professor HARE, 12 W.

2. Cicero. (Credit same as in course 1.) Continuation of course 1. The orations read are the fourth oration against Catiline, the oration for Archias, and the Manilian law. Prerequisite: Latin 1.

Second semester; 8:00; Professor HARE, 12 W.

3. Virgil. (Credit same as in course 1.) Primarily for freshmen offering three units for entrance. The first three books of the Aeneid are read. Composition once a week. Prerequisite: Latin 2.

First semester; M. T. Th. F., 9:00; Professor HARE. 12 W.

4. Virgil. (Credit same as in course 1.) Continuation of course 3. Books four, five, and six are read, and short papers on assigned topics suggested by the text are required. Composition once a week. Prerequisite: Latin 3.

Second semester; M. T. Th. F., 9:00; Professor HARE. 12 W.

5. Cicero—De Senectute and De Amicitia; Livy XXI. (5 Hrs.) Reading and translation, review of grammar, study of assigned topics in Roman history and philosophy. Open to students who have had the preceding or four units of high school Latin.

First semester; 9:00; Professor CANNADAY. 29 W.

6. Livy XXII, and Horace—Odes and Epodes. (5 Hrs.) Continuation of course 5. Particular attention to the meters of Horace, his life and beliefs.

Second semester; 9:00; Professor CANNADAY. 29 W.

7. Cicero—De Officiis. (3 Hrs.) Rapid reading and study of Cicero's ethical teachings.

First semester; M. W. F., 11:00; Professor CANNADAY, 29 W.

8. Comedy. (3 Hrs.) Five or six plays of Plautus and Terence. Study of characters, development of plot, etc.

Second semester; M. W. F., 11:00; Professor CANNADAY, 29 W.

9. Teachers' Course in Latin. (2 Hrs.) Study of indirect discourse in Caesar and Livy, and composition; discussion of questions pertaining to the teaching of Latin, etc. No credit will be allowed in this course until the following course is taken.

First semester; T. Th., 11:00; Professor CANNADAY, 29 W.

10. Teachers' Course in Latin. (2 Hrs.) Continuation of 9.

Second semester; T. Th., 11:00; Professor CANNADAY, 29 W.

11. Horace—Satires and Epistles. (4 Hrs.) Selected satires and epistles are read, with attention to Horace's personal life.

First semester; M. T. Th. F., 10:00; Professor CANNADAY. 29 W.

12. Roman Oratory. (4 Hrs.) Cicero's De Oratore and Tacitus's Dialogus de Oratoribus are read; preparation of the orator, his work and influence are discussed.

Second semester; M. T. Th. F., 10:00; Professor CANNADAY, 29 W.

15. Roman Rhetoric. (2 Hrs.) Open to seniors and graduate students. Quintilian's Institutions.

First semester; hours to be arranged; Professor CANNADAY. 29 W.

16. Lucretius. (2 Hrs.) Open to seniors and graduate students. De Rerum Natura, with a study of his doctrines.

Second semester; hours to be arranged; Professor CANNADAY, 29 W.

17. Roman Life and Customs. (4 Hrs.) A study of the Romans in their homes, their intercourse in business and professional life.

Second semester; hours to be arranged; Professor CANNADAY. 29 W.

18. Outlines of Latin Literature. (3 Hrs.) The representative writers of the different periods will be discussed in some detail and a considerable amount of parallel reading will be required.

First semester; hours to be arranged; Professor CANNADAY, 29 W.

LAW.

Credit will be given in the College of Arts and Sciences for certain courses in law. Candidates for the regular A.B. degree may elect not more than fifteen hours of law. Candidates in the combined A.B. and LL.B. course may count the entire first-year work in law for credit toward the A.B. degree. See page 242.

LIBRARY SCIENCE.

Mr. Arnett.

1. **Library Methods.** (2 Hrs.) An introductory course for the purpose of acquainting students with the University Library and the practice of library methods; instruction in the use of catalogues, indexes, and general reference books, and in the selection and purchase of books.

First semester; T. Th., 8:00; L.

2. **Library Methods.** (2 Hrs.) Theory and practice of library methods, including elementary cataloguing, classification, binding and repair of books, loan desk, etc.

Second semester; T. Th., 8:00; L.

MACHINE DESIGN AND CONSTRUCTION.

Credit not to exceed fifteen hours in all will be given in the College of Arts and Sciences for courses 20, 21, 22, 23, 24, 25, 28, and 30 in mechanical drawing, course 26 in descriptive geometry, courses 27 and 29 in mechanism and machinery and courses 46 and 47 in industrial management offered in the College of Engineering. For detailed announcements of these courses see pages 168 to 175.

MATHEMATICS.

Professor Eiesland, Professor Hodgson, and Miss Buchanan.

Courses 9, 10, 11, and 12 are intended for those who choose mathematics as a major subject. Courses 9, 10, and 11 are recommended for those whose major is physics.

A. Algebra. A four-hour course for which no college credit is given, intended primarily for freshmen who enter with a condition in mathematics or who cannot make a satisfactory record in course 3. If offered to remove entrance condition, one-half credit is given.

First semester; T. W. Th. F., 9:00 and 11:00; Miss Buchanan, 225 M. H. This course is repeated the second semester if a sufficient number of students apply.

2. Solid Geometry. (4 Hrs.) (If offered to remove entrance conditions, one-half unit.) This course includes also a short review of special topics in algebra, such as radicals, equations of the first and second degrees, etc.

First semester; M. W. Th. F., 8:00; Miss Buchanan, 225 M. H.

Second semester; M. W. Th. F., 11:00; Miss Buchanan, 225 M. H.

3. Advanced Algebra. (3 Hrs.) Radicals and theory of exponents, imaginaries, graphic algebra, logarithms, infinite series, elementary theory of equations with Horner's method, etc. Prerequisite: 1½ units of algebra.

First semester; M. W. F., 8:00, 9:00, and 11:00; Professor Eiesland, 11 M., Professor Hodgson, 10 M., and Miss Buchanan, 225 M. H.

Second semester; 9:00 and 11:00; Miss Buchanan, 225 M. H.

4. Plane Trigonometry. (2 Hrs.) Prerequisite: algebra through quadratics.

First semester; T. Th., 8:00, 9:00, and 11:00; Professor Eiesland, 11 M., Professor Hodgson, 10 M., and Miss Buchanan, 225 M. H.

Second semester; T. Th., 9:00 and 11:00.

5. Plane Analytic Geometry. (3 Hrs.) Prerequisite: courses 3 and 4.

Second semester; M. W. F., 9:00: section one, Professor Eiesland, 11 M.: section two, Professor Hodgson, 10 M.

6. Plane and Spherical Trigonometry. (2 Hrs.) This course is a continuation of courses 3 and 4 and includes topics in plane trigonometry and advanced algebra and also application of spherical trigonometry to elementary problems in astronomy.

Second semester; T. Th., 9:00; section one, Professor EIESLAND, 11 M.; section two, Professor HODGSON, 10 M.

7. Differential and Integral Calculus. (3 Hrs.) Prerequisite: courses 3, 4, 5, and 6.

First semester; M. W. F., conference hours, T. Th., 8:00; Professor EIESLAND, 11 M.

8. Differential and Integral Calculus. (3 Hrs.) This course is a continuation of course 7.

Second semester; M. W. F., conference hours, T. Th, 8:00; Professor EIESLAND, 11 M.

NOTE.—In courses 7 and 8, the part of each denoted as "Conference," two hours weekly, is not intended to increase the amount of prepared work. It really amounts to two hours weekly of study in preparation for the regular class recitation with the help and guidance of the teacher. Attendance at these conferences is required just as in the case of regular recitations.

9. Differential Equations. (3 Hrs.) Prerequisite: courses 7 and 8 or 7 and 14. This course is especially recommended to those who expect to take up advanced work, such as physical chemistry, mathematical physics and theory of electricity.

Second semester; M. W. F., 10:00; Professor EIESLAND, 11 M.

10. Theory of Determinants and Analytic Geometry of Space. (2 Hrs.) Open to seniors and graduate students. Prerequisites: courses 5, 7, and 8.

First semester; M. W., 3:00; Professor EIESLAND, 11 M.

11. Advanced Topics in Calculus. (2 Hrs.)

Second semester; T. Th., 3:00; Professor EIESLAND, 11 M.

12. Projective Geometry. (3 Hrs.) Open to seniors and graduate students.

Second semester; M. W. F., 10:00; Professor HODGSON, 10 M.

13. Analytic Geometry and Calculus. (5 Hrs.)

First semester; 11:00; Professor HODGSON, 10 M.

14. Differential and Intregal Calculus. (5 Hrs.) Continuation of course 13.

Second semester; 11:00; Professor HODGSON, 10 M.

NOTE.—Courses 13 and 14, which are intended for science as well as for engineering students, are equivalent to courses 5, 7, and 8.

15. Introduction to Lie's Theory of Continuous Groups with Application to Differential Equations. Prerequisite: courses 9, 10, and 12. Three hours a week throughout the year. Credit and hours to to be arranged. Professor EIESLAND, 11 M.

16. Higher Plane Curves with Special Reference to Curves of the Third and the Fourth Order. Two hours a week throughout the year. Open only to graduate students. Credit and hours to be arranged. Professor HODGSON, 10 M.

17. Introduction to the Theory of Functions of a Complex Variable. Open only to graduate students. Credit and hours to be arranged. Professor EIESLAND, 11 M.

18. Higher Algebra and Introduction to the Theory of Invariants. Open only to graduate students. Credit and hours to be arranged. Professor HODGSON, 10 M.

19. Differential Geometry and Theory of Surfaces. Three hours a week throughout the year. Professor EIESLAND, 11 M.

20. Theory of Numbers. An elementary course. Open only to graduate students. Two hours a week throughout the year. Professor HODGSON, 10 M.

21. Differential Equations. An advanced course with applications; the algebra of vectors. Prerequisite: courses 7, 8, and 9. Professor EIESLAND.

Astronomy.

1. Descriptive Astronomy. (3 Hrs.) Opportunity is given to those who wish to do sextant work or work with a portable transit.

Second semester; hours to be arranged; Professor EIESLAND, 11 M.

MECHANICS AND APPLIED MATHEMATICS.

Credit will be given in the College of Arts and Sciences for courses 70, 71, 72, and 73 in mechanics offered in the College of Engineering. For detailed announcements of these courses see page 178.

MINING ENGINEERING.

Credit will be given in the College of Arts and Sciences for courses 85 and 96 in metallurgy offered in the College of Engineering. For detailed announcements of these courses see page 180.

MUSIC.

Credit not to exceed fifteen hours in all will be given in the College of Arts and Sciences for courses 1, 2, 3, and 4 in the theory of music and courses 5 and 6 in the history of music offered in the School of Music. For detailed announcements of these courses see page 285.

PHILOSOPHY.

Professor Strickland.

The purpose of the courses offered in this department is to open up the field of philosophy to the student and to bring some of the more important results of rational reflection into vital relation with the practical problems and needs of present day life.

The method of instruction is through the use of approved texts, lectures, class discussions, papers and collateral reading with written reports, and also assigned work in relatively independent thinking as soon as the student is ready for it. The purpose is not only that the student may learn the results achieved by the great thinkers, but also that he himself may learn to think with some degree of assurance and independence.

1. **General Psychology.** (3 Hrs.) The principal facts and processes of the mental life are presented with their interpretation and laws. The method is descriptive and empirical and the course is of value not only as a part of a liberal education but also especially to those who look forward to teaching, medicine, law or theology.

First semester; M. W. F., 9:00; 33 L.

14. **The Human Mind.** (3 Hrs.) An introductory study of the mental life of the human individual from the standpoint of applied psychology. Normal mental processes; special and abnormal phenomena. Philosophy 1 is recommended but not required as a preceding course.

Second semester; M. W. F., 9:00; 33 L.

2. **Logic.** (2 Hrs.) Deductive and inductive logic, with practical exercises in the use of the logical forms and emphasis upon their limitations.

Second semester; T. Th., 9:00; 33 L.

3. **Philosophy of Thought and Knowledge.** (2 Hrs.) A study in psychological and logical theory and of the fundamental laws of thought and the rational processes by which we build up knowledge. A brief exposition of the origin and development of language and its function and limitations as the instrument of thought. Prerequisite: Philosophy 1 or consent of instructor.

First semester; T. Th., 9:00; 33 L.

4. **Metaphysics.** (3 Hrs.) The problem of reality is taken up and those basic principles which underlie all thinking are examined critically with the view of discovering and expounding a theory of being, a view of nature, and a valuation of the personal self. Open only to juniors, seniors or graduate students who have completed course 3 or who have otherwise prepared for work in metaphysics.

First semester; M. W. F., 11:00; 33 L.

5. **Ethics.** (3 Hrs.) The ethical problem, and the method by which it should be approached, based on psychology; the various types of ethical theory; consideration of the origin and authority of the moral law in the developing personal life of man, and the function of conscience; rational principles governing conduct which may be brought to bear upon the ethical aspects of current social, economic and political questions.

Second semester; M. W. F., 11:00; 33 L.

6. **Theism.** (3 Hrs.) As an approach to the study of the theistic world-view a critical examination is first made of the other philosophical world-views. This prepares the way for some adequate consideration of the infinite ground of the universe as intelligent, personal and ethical. Prerequisite: course 3 or 4, or 7 and 8.

Second semester; hours to be arranged; 33 L.

7. **History of Philosophy.** (3 Hrs.) A study of the principal problems of philosophy in their rise and development through Greek, Roman and mediaeval thought. The effort is made to present the various systems in relation to the historic movements of the periods to which they belong.

First semester; M. W. F., 10:00; 33 L.

8. **Modern Philosophy.** (3 Hrs.) A continuation of course 7. This course offers a somewhat brief study of the work of the great philosophic thinkers of the eighteenth and nineteenth centuries.

Second semester; M. W. F., 10:00; 33 L.

9. **Contemporary Philosophy.** (2 Hrs.) A more intensive study of the more important philosophic movements of today. Pragmatism, the philosophy of Bergson, and the spiritual idealism of Eucken and Bowne; character of the philosophic thinking which underlies present noteworthy movements in science, sociology and religion. Open to those who have had course 4 or courses 7 and 8.

First and second semesters; hours to be arranged; 33 L.

10. History of Religion. (2 Hrs.) Primitive religious beliefs, practices and forms of worship; the question of the origin of religion on the human side, so far as it can be treated by the historical method; common elements of meaning in all religions which point to an underlying unity; brief study of several of the great non-Christian religions.

First semester; T. Th., 10:00; 33 L.

11. Philosophy of the Christian Religion. (2 Hrs.) The work begins with a rapid survey of the growth of Hebrew religion. Following this the origin and growth of early Christianity are traced. This gives the historical background. Then some of the great fundamental Christian beliefs are considered, not theologically but from the philosophic point of view. The object is to present in outline a philosophy of Christianity which shall be in harmony with modern thinking and so to point the way to intellectual foundations for religious faith.

Second semester; T. Th., 10:00; 33 L.

12. Philosophy Seminar. (2 Hrs.) The work will consist of a more intensive study of some problem of philosophy as preparation for the writing of a dissertation or thesis. It is intended for those doing major work in philosophy. This course will be offered as soon as there is need for it.

PHYSICAL EDUCATION.

Men's Department.

Assistant Professor PYLE.

The director in charge will examine each student and prescribe the proper exercise for his individual need. Special attention will be given to those who are constitutionally weak. The work of the department is carefully planned and is graded, as much as possible, to meet the needs of the individual student.

1. **Elementary Gymnastics, Theory and Practice.** (1 Hr.) The object of this course is to give each student the fundamental principles of physical training, so that he may attain physical efficiency.
First semester; T. Th., 3:00; G.

2. **Intermediate Gymnastics, Theory and Practice.** (1 Hr.) Gymnastic nomenclature; drills; wands; calisthenics; dumb-bells; intermediate work on parallel bars, horses, buck, mats and horizontal bars; gymnastic dancing.
First semester; M. Th., 2:00; G.

3. **Elementary Gymnastics, Theory and Practice.** (1 Hr.) A continuation of Physical education 1.
Second semester; T. Th., 3:00; G.

4. **Advanced Gymnastics, Theory and Practice.** (1 Hr.) Advanced and difficult work on horizontal bars, parallel bars, horses, buck, rings and mats; pyramid work; nomenclature.
First semester; M. W., 3:00; G.

5. **Advanced Gymnastics.** (1 Hr.) Continuation of Physical education 4. The work of this course is of the most advanced and difficult type and is open only to those students who show special aptitude for gymnastic work.
Second semester; M. W., 3:00; G.

6. **Track Athletics, Theory and Practice.** (1 Hr.) This course is open to track candidates and to those who wish to train systematically for track and field sports.
Second semester; M. W., 4:00; Gymnasium and Athletic Field.

7. General Gymnastics and Recreation. Open to all students for exercise, bodily development and recreation; basketball, volleyball, and other games.

First and second semesters; M. T. W. Th. F., 4:00 to 6:00; G.

8. Basketball, Theory and Practice. Open to all basketball candidates. Winter months only.

M. T. W. Th. F. S., 4:15; Basketball Building.

Women's Department.

MRS. CHEZ.

10. Elementary Gymnastics. (1 Hr.) Tennis, graded gymnastics, light apparatus, controlling movements, folk dances, games.

First semester; hours to be arranged; 1 W.

11. Elementary Gymnastics. (1 Hr.) Continuation of physical education 15.

Second semester; hours to be arranged; 1 W.

12. Advanced Gymnastics. (1 Hr.) Basketball, tennis, light gymnastics, stage marching, æsthetic and rhythmic gymnastics, folk dancing. Prerequisite: Physical education 10 and 11.

First semester; hours to be arranged.

13. Advanced Gymnastics. (1 Hr.) Continuation of Physical education 12.

Second semester; hours to be arranged; 1 W.

14. Normal Course in Theory and Practice of Gymnastics. (1 Hr.) Study of the theory of gymnastics, the value and limitations of gymnastics, the place of play and athletics, practice in teaching gymnastics and coaching athletics, emergency work, problems of personal hygiene. Prerequisite: Physical education 10, 11, 12, and 13.

First semester; hours to be arranged; 1 W.

15. Physical Education in Elementary and Secondary Schools. (1 Hr.) Open to all students. Characteristics, tendencies, and needs of children and adolescents with special application to school conditions; practical problems of races, playground, and gymnasium; the physical, social and moral questions.

Second semester; hours to be arranged; 1 W.

16. Practical Hygiene. (No credit.) Open to all women students. A course of lectures designed to be specially helpful to women.

PHYSICS.

Professor WAGGONER, Mr. MOON, and Mr. FREEMAN.

NOTE.—For description of the physical laboratories see page 23.

The various courses offered in physics are designed to meet the needs of the students in the Colleges of Arts and Sciences, Agriculture, and Engineering, and in the School of Medicine. For students who expect to teach physics the laboratory offers facilities for individual laboratory work and the construction of apparatus. There is a laboratory fee of $2.00 for each course in which laboratory work is given.

1. Introductory Physics. (3 Hrs.) Primarily for freshmen. Required of students in the College of Agriculture, and recommended for all students in the College of Arts and Sciences who elect physics from the science group. The course is based on Kimball's College Physics and presents the fundamental principles of physics and their application to every day life. See course 2 below. Prerequisite: plane geometry.

First semester; lectures; section one, M. W., 8:00; Professor WAGGONER, 11 S.; section two, M. W., 9:00; Mr. MOON, 11 S.; Quiz sections, Th., 8:00, F., 8:00, or F., 9:00; Mr. MOON and Mr. FREEMAN, 11 S.

2. Introductory Physical Laboratory. (1 Hr.) This course accompanies, and is required of all students who take course 1. Medical students are required to register for two hours. The course consists of individual, quantitative determinations of the various physical constants, and occupies one laboratory period per week.

First semester; section one, T., 2:00; section two, Th., 2:00; section for agricultural students, Th., 10:00-12:00; Mr. MOON and Mr. FREEMAN, 11 S.

3. Introductory Physics. (3 Hrs.) A continuation of course 1 which is a prerequisite. See course 4 below.

Second semester; lectures; section one, M. W., 8:00; Professor WAGGONER, 11 S.; section two, M. W., 9:00; Mr. MOON, 11 S. Quiz sections; Th., 8:00, F., 8:00, or F., 9:00: Mr. MOON and Mr. FREEMAN, 11 S.

4. Introductory Physical Laboratory. (1 Hr.) A continuation of course 2, which is prerequisite.

Second semester; section one, T., 2:00; section two, Th., 2:00; section for agricultural students, Th., 10:00-12:00; Mr. Moon and Mr. Freeman, 11 S.

5. Introductory Physics. Credit according to the amount of work done. A continuation of courses 3 and 4. Recommended for those who expect to teach physics in secondary schools. Prerequisites: Physics 1, 2, 3, 4 and trigonometry.

Hours to be arranged: Mr. Moon.

6. General Physics. (4 Hrs.) Required of all candidates for engineering degrees, and recommended for all students in Arts and Sciences who elect physics from the science group. The derivation of the mathematical statements of the laws of physics and their application to the solution of engineering problems. Prerequisites: analytical geometry and one full unit of entrance physics. See course 7 below.

First semester; T. W. Th. F., 9:00; Professor Waggoner, 11 S.

7. General Physical Laboratory. (1 Hr.) This course accompanies and is required of all students who take course 6. The work is designed primarily for engineering students and occupies one laboratory period per week. No student will be permitted to enter this course until he has presented to this department a satisfactory note book such as is specified in the entrance requirements of the University.

First semester; section one for M. E. students, M., 9:00-11:00. Section two for C. E. students, M., 2:00-4:00; Mr. Moon, 2 S.

8. General Physics. (4 Hrs.) A continuation of course 6 which is a prerequisite.

Second semester; T. W. Th. F., 9:00; Professor Waggoner, 11 S.

9. General Physical Laboratory. (1 Hr.) A continuation of course 7, which is a prerequisite.

Second semester; section one for M. E. students, M., 9:00-11:00. Section two, for C. E. students, M., 2:00-4:00; Mr. Moon, 2 S.

10. Electrical Measurements. (4 Hrs.) This course is designed for, and required of the candidates for the degree of B.S.M.E., and B.S.E.M. It consists of the study of photometry, magnetic properties of materials, the theory, calibration, and use of various electrical instruments. Prerequisites: Physics 6, 7, 8, and 9, and integral calculus.

First semester: T. Th., 10:00; laboratory, W., 2:00-4:00; Professor Waggoner, 11 S.

11. **Radio-Telegraphy.** (4 Hrs.) This course consists of the study of the modern methods used in radio-transmission of intelligence. The department has a small installation for wireless telegraphy which is used as a basis for the laboratory study of various systems of transmission. Students are expected to spend one evening (8:00-11:00 p. m.) each week in the laboratory in addition to the regular required laboratory work.

Second semester; T. Th., 10:00; laboratory, W., 2:00-5:00; Professor WAGGONER and Mr. FREEMAN. 11 S.

12. **Photography.** (2 Hrs.) Open to all students of the University. One lecture and one laboratory exercise per week. The simple theory of photography; making lantern slides, micro-photographs and portraits. Students will be expected to purchase the necessary supplies.

Second semester; lectures. Th., 4:00; laboratory, hours to be arranged: Mr. MOON. 1 S.

16. **Advanced Physical Laboratory.** This work is individual and the credit depends upon the amount of work done. Precise measurements in physics. Open to students who have completed physics 6, 7, 8, 9, and integral calculus.

Semester and hours to be arranged; Professor WAGGONER. Mr. MOON, and Mr. FREEMAN.

18. **Heat.** (4 Hrs.) Lectures and laboratory; based on Edser's "Heat for Advanced Students." Thermometers and pyrometers, electric furnace construction, quantitative determination of the various heat quantities and the melting and boiling points of various metals and fluids. Prerequisites: Physics 6, 7, 8, 9, and integral calculus. (Omitted 1916-17).

First semester; M. W. F., 11:00; laboratory, T., 2:00-4:00; Professor WAGGONER, 11 S.

19. **Heat.** (4 Hrs.) A continuation of course 18 which is a prerequisite.

Second semester; M. W. F., 11:00; laboratory, T., 2:00-4:00; Professor WAGGONER. 11 S.

22. **Light.** (4 Hrs.) Open to seniors and graduate students. Lectures and laboratory work; based on Edser's "Light for Students;" photometric and spectrophotometric study of light sources; artificial illumination; the various optical lens systems; spectrum analysis and the polariscope. Prerequisite: Physics 6, 7, 8, 9, and integral calculus.

First semester; T. Th. F., 11:00; laboratory, T., 2:00-4:00; Mr. MOON. 11 S.

23. Light. (4 Hrs.) Open to seniors and graduate students. A continuation of course 22 which is a prerequisite.

Second semester; T. Th. F., 11:00; laboratory, T., 2:00-4:00; Mr. MOON, 11 S.

25. Advanced Electricity and Magnetism. (4 Hrs.) For graduate students only. Lectures and laboratory work. The lectures will be based on Starling's Electricity. Prerequisite: Physics 6, 7, 8, 9, and integral calculus.

First semester; T. Th. F., 11:00; laboratory, T., 2:00-4:00; Professor WAGGONER, 11 S.

26. Advanced Electricity and Magnetism. (4 Hrs.) For graduate students only. A continuation of course 25 which is a prerequisite.

Second semester; T. Th. F., 11:00; laboratory, T., 2:00-4:00; Professor WAGGONER, 11 S.

PHYSIOLOGY AND HYGIENE.

1. Physiology. (5 Hrs.) Intended for college students who do not care to go into the details of medical physiology. The course covers fully all the preparation needed for teachers' course. Laboratory fee, $1.00.

First semester; M. T. Th. F., 10:00; laboratory, W., 2:00-5:00; Professor SIMPSON, M. B.

5. Hygiene and Sanitation. (2 Hrs.) Open only to juniors and seniors. This course considers the principles of hygiene and sanitation as they pertain to the welfare of the individual, and the care of the public health.

Second semester; Lectures, T. Th., 8:00; Professor ARKIN, M. B.

6. Hygiene and Sanitation Laboratory. (2 Hrs.) Open to a limited number of juniors and seniors. Not open to medical students. Experiments in bacteriology as it relates to hygiene and disease prevention. Laboratory fee, $3.00.

Second semester; W. F., 2:00-4:00; Professor ARKIN, M. B.

3. Rural Sanitation. (1 Hr.) Sources and quality of rural water supplies; construction of water supply and sewerage systems; plumbing, heating and ventilation of residences and school buildings. Control of water-borne infectious diseases.

Second semester; Th., 11:00; Mr. OSBORN, 224 M. H.

PUBLIC SPEAKING.

Professor NEIL.

The purpose of this department is to prepare students for the work of public speakers and readers; to train students to teach reading and public speaking in schools and colleges; and to enable such students as do not expect to be professional speakers, to get the greatest possible good from the printed page and to express themselves in an easy and effective manner.

1. The Psychology of Speech. (3 Hrs.) A practical study of the principles of psychology as employed in the development of imagination, conception, memory, and emotion for speech.

First semester; M. W. F., 11:00; 14 M.

2. The Psychology of Speech. (3 Hrs.) Continuation of course 1. An application of the principles of psychology to the development of voice and action in speech. Prerequisite: course 1.

Second semester; M. W. F., 11:00; 14 M.

3. Literary Analysis, Synthesis and Rendition. (2 Hrs.) Designed as supplementary study for students who have completed courses 1 and 2. (Omitted 1917-18). Prerequisite: courses 1 and 2.

First semester; T. Th., 11:00; 14 M.

4. Advanced Synthesis and Rendition. (2 Hrs.) A continuation of course 3. A literary analysis, synthesis and rendition of styles of literature not studied in course 3, including more difficult selections. (Omitted 1917-18).

Second semester; T. Th., 11:00; 14 M.

5. Dramatic Study of Shakespeare. (2 Hrs.) A psychological analysis of the setting, the characters, the plot and the purpose of one of Shakespeare's comedies, synthesis of these elements into simple and effective acting; memoriter presentation of the plays studied. (Omitted 1917-18).

First semester; T. Th., 11:00; 14 M.

6. Dramatic Study of Shakespeare. (2 Hrs.) A continuation of the actional study outlined in course 5. A Shakespearean tragedy is studied. (Omitted 1917-18).

Second semester; T. Th., 11:00; 14 M.

7. Dramatization and Adaptation. (3 Hrs.) Open to students who have completed courses 1 and 2. A study in adapting short stories for public presentation. An examination of the qualities which fit a story for public use. Original adaptations required of each student. Practical training in the presentation of these.

First semester; M. W. F., 9:00; 14 M.

8. Dramatization and Adaptation. (3 Hrs.) A continuation of the study begun in course 7. Original work in dramatizing a novel. Practical training in the presentation of the story dramatized.

Second semester; M. W. F., 9:00; 14 M.

9. Vocal Interpretation of the Bible. (2 Hrs.) Designed for advanced students in literature. The object of this course is to teach the student the literary worth of the Bible, its narrative, didactic, allegorical, dramatic, oratorical, lyric, and epic spirit. This is accomplished through psychological study and vocal rendition of Biblical selections. (Omitted 1917-18).

Second semester; T. Th., 9:00; 14 M.

10. Extemporaneous Speaking. (3 Hrs.) Required of all candidates for the baccalaureate degree in the college of agriculture. Analysis of noted extemporaneous speeches; subjects appropriate for extemporaneous speaking; presentation of speeches before the class.

First semester; M. W. F., 10:00; 14 M.

11. Extemporaneous Speaking. (3 Hrs.) A continuation of course 10.

Second semester; M. W. F., 10:00; 14 M.

12. The History of Oratory. (2 Hrs.) A study of the sources, characteristics, and results of the great periods of oratory. A study of the individual work and worth of the most noted orators. Extemporaneous reports on these subjects by the students. (Omitted 1917-18).

First semester; T. Th., 9:00; 14 M.

13. Original Orations. (2 Hrs.) Designed to follow course 12 and to give the student thorough fundamental training in writing and presenting a formal speech. A study of the sources of clearness, elegance, force and persuasion; development of these in the individual student. (Omitted 1917-18).

Second semester; T. Th., 9:00; 14 M.

14. Argumentation and Debate. (2 Hrs.) A study of the laws of argumentation; training in the statement and analysis of subjects for debate; training in gathering and tabulating material for proof; training in construction of briefs and writing of arguments; oral presentation of short arguments and debates.

First semester; T. Th., 10:00; 14 M.

15. Advanced Argumentation and Debate. (2 Hrs.) Continuation of course 14. Critical study of noted specimens of argumentation; research work on live questions of the day; writing of briefs and arguments on these questions; extemporaneous speeches and debates.

Second semester; T. Th., 10:00; 14 M.

16. The Teaching of Reading and Speaking. (2 Hrs.) Open to those who have completed courses 1, 2, and 3. Designed as a special training for those who expect to teach public speaking, and for those who expect to teach reading in the high schools. (Omitted 1917-18).

First semester; M. F., 9:00; 14 M.

17. The Teaching of Reading and Speaking. (2 Hrs.) Open to those who have completed courses 1, 2, 3, and 16. Practical training in the teaching of more advanced courses in reading and speaking. (Omitted 1917-18).

Second semester; M. F., 9:00; 14 M.

18. Actional Study of Modern Drama. (2 Hrs.) Open to those who have successfully passed the competitive contests in dramatics. An intensive study of one modern play and a public presentation of the play studied.

Second semester; hours to be arranged; 14 M.

RAILWAY AND HIGHWAY ENGINEERING.

Credit will be given in the College of Arts and Sciences for courses 100 and 101 in land surveying offered in the College of Engineering. See page 182.

ROMANCE LANGUAGES AND LITERATURE.

Professor Stathers, Associate Professor Darby, and Mr. Gilbert.

French.

1. **Elementary French.** (5 Hrs.) Grammar, reading and composition. Stress is laid on the pronoun and verb. Constant practice in pronunciation and oral understanding. Fraser and Squair's French Grammar.

First semester; first section, 9:00; Associate Professor Darby, 14 W.; second section, 11:00; Professor Stathers, 11 W.

2. **Modern French.** (5 Hrs.) A continuation of course 1. Grammar, reading, composition and oral understanding. Fontaine's En France, Laurie's Mémories d'un Collégien, Bruno's Le Tour de la France.

Second semester; first section, 9:00; Associate Professor Darby, 14 W.; second section, 11:00; Professor Stathers, 11 W.

3. **Fiction of the Nineteenth Century.** (3 Hrs.) Reading and study of representative works from Mérimée, George Sand, Victor Hugo, Alphonse Daudet, Guy de Maupassant, Paul Margueritte, Pierre Loti, Anatole France.

First semester; first section, M. W. F., 8:00; second section, M. W. F., 10:00; Associate Professor Darby, 14 W.

4. **Advanced Grammar and Composition.** (2 Hrs.) Detailed study of the parts of speech and review of verbs. Composition and dictation based on matter illustrative of the work. Given in connection with course 3.

First semester; T. Th., 10:00; Mr. Gilbert, 13 W.

5. **France and the French.** (3 Hrs.) Study of the country from a commercial and geographical standpoint; Parisian and provincial life; conversation in French on questions of popular interest; colateral reading and reports.

Second semester; first section, M. W. F., 8:00; second section, M. W. F., 10:00; Associate Professor Darby, 14 W.

6. **Drama of the Nineteenth Century.** (2 Hrs.) Reading and study of several plays chosen from the works of Alfred de Musset, Scribe, Augier, Dumas, Bornier, Sardou, Lemaître, Rostand. Given in connection with course 5.

Second semester; T. Th., 10:00; Mr. Gilbert, 13 W

7. The Classic School. (3 Hrs.) This course includes the study of the origin and development of classic literature and the lives and works of the leading authors from the Pléiade to Molière. Lectures, readings and reports.

First semester; M. W. F., 9:00; Professor STATHERS, 11 W.

8. The Classic School after Moliere. (3 Hrs.) A continuation of course 7, comprising the study of the remaining authors of the seventeenth century and the principal authors of the eighteenth century. Essays, collateral reading and reports on related topics of interest of the period.

Second semester; M. W. F., 9:00; Professor STATHERS, 11 W.

9. French Syntax and Conversation. (2 Hrs.) Careful review of the parts of speech and study and application of them by means of original sentences. Conversation based on anecdotes and short stories both original and from texts.

First semester; T. Th., 9:00; Professor STATHERS, 11 W.

10. Advanced French Discourse. (2 Hrs.) A continuation of course 9. Study and application of idiomatic constructions in order to acquire facility in expression both in writing and in speaking. Paraphrasing and discussions in French based on subjects of moderate difficulty.

Second semester; T. Th., 9:00; Professor STATHERS, 11 W.

NOTE.—At least seven of the preceding courses are prerequisite to courses 11 to 22, which, as far as it is convenient, are given in French.

11. The Romantic Movement. (3 Hrs.) Lectures on the origin, development and decline of romanticism. Study of representative works of the first half of the nineteenth century. Essays, collateral reading and reports.

First semester; M. W. F., 10:00; Professor STATHERS. 11 W.

12. French Literature since 1850. (3 Hrs.) Careful study of the different literary groups and schools of the period, critical reading of representative works of the leading authors and lectures on subjects of special interest.

Second semester; M. W. F., 10:00; Professor STATHERS, 11 W.

13. The Novel in France. (2 Hrs.) Origin and development of the novel, reading and comparison of representative works from the earliest appearance to the present time. Lectures, essays and reports. (Omitted 1917-18).

First semester; T. Th., 10:00; Associate Professor Darby, 14 W.

14. French Lyric Poetry. (2 Hrs.) Critical reading of representative poems from François Villon to the present. Versification and poetic forms; lives and works of the leading poets and their groups and schools. (Omitted 1917-18).

Second semester; T. Th., 10:00; Associate Professor Darby, 14 W.

15. Early French Drama. (3 Hrs.) Open to seniors and graduate students. Origin of the drama, its early development during the Middle Ages and Renaissance period; study of representative dramatic productions of those periods.

First semester; M. W. F., hours to be arranged; Professor Stathers, 11 W.

16. Advanced Composition and Phonetics. (3 Hrs.) Open to seniors and graduate students. Study of phonetics and idiomatic construction accompanied by a systematic review of French syntax. Phonetic transcription and daily themes.

Second semester; M. W. F., hours to be arranged; Professor Stathers, 11 W.

17. Contemporary French Drama. (2 Hrs.) Lectures on the present tendencies of the French stage, its influence and its importance. Readings and reports on recent dramatic productions.

First semester; T. Th., 10:00; Associate Professor Darby, 14 W.

18. Topic from Nineteenth Century Literature. (2 Hrs.) This course is based upon the life and works of some author of the period or upon some literary group whose works and influences are studied.

Second semester; T. Th., 10:00; Associate Professor Darby, 14 W.

19. Historical French Grammar. (3 Hrs.) Open only to graduate students. Study of the origin and development of modern French syntax from popular Latin through old French and the various formative periods of the language. Reading of selected works best suited to illustrate this development. (Omitted 1917-18).

First semester; M. W. F., hours to be arranged; Associate Professor Darby, 14 W.

20. Literature of the Sixteenth Century. (2 Hrs.) Open only to graduate students. Lectures on the French Renaissance and study of the lives and works of Rabelais, Calvin, Marot, Montaigne. Essays and collateral reading. (Omitted 1917-18).

Second semester; T. Th., hours to be arranged; Professor STATHERS, 11 W.

21. Old French. (3 Hrs.) Open only to graduate students. Study of Old French from the standpoint of derivation, inflection and syntax. Reading of selected and illustrative works. (Omitted 1917-18).

Second semester; M. W. F., hours to be arranged; Associate Professor DARBY, 14 W.

22. Literature of the Middle Ages. (2 Hrs.) Open only to graduate students. General survey of the period and study of selections from leading literary productions from the eleventh to the close of the fifteenth century. (Omitted 1917-18).

First semester; T. Th., hours to be arranged; Professor STATHERS, 11 W.

Italian.

31. Elementary Italian. (5 Hrs.) Pronunciation, grammar, easy reading, composition and oral understanding. Marinoni's Italian Grammar and Italian Reader.

First semester; 11:00; Associate Professor DARBY, 14 W.

32. Modern Italian. (5 Hrs.) A continuation of course 31. Reading in class of Manzoni's I Promessi Sposi and selections from other modern authors. Composition, dictation and conversation.

Second semester; 11:00; Associate Professor DARBY, 14 W.

33. Modern Italian Literature. (3 Hrs.) Study of the leading authors and reading of representative works from Italian literature of the enghteenth and nineteenth centuries. Collateral reading and reports. (Omitted 1917-18).

First semester; M. W. F., hours to be arranged; Associate Professor DARBY, 14 W.

34. Introduction to Early Italian Literature. (3 Hrs.) Lectures on Dante and his precursors, reading and study of selections from Dante, Boccacio, Petrach and Tasso. Collateral reading and reports. (Omitted 1917-18).

Second semester; M. W. F., hours to be arranged; Associate Professor DARBY, 14 W.

35. Italian Syntax and Narration. (2 Hrs.) Careful review of the parts of speech and study and application of them by means of original sentences. Narration in Italian of anecdotes and short stories both original and from texts. (Omitted 1917-18).

First semester; T. Th., hours to be arranged; Associate Professor DARBY, 14 W.

36. Advanced Italian Discourse. (2 Hrs.) A continuation of course 35. Study and application of idomatic constructions in order to acquire facility in expression both in writing and in speaking. Paraphrasing and discussions in Italian based on subjects of moderate difficulty. (Omitted 1917-18).

Second semester; T. Th., hours to be arranged; Associate Professor DARBY, 14 W.

Spanish.

41. Elementary Spanish. (5 Hrs.) Grammar and reading with practice in pronunciation, composition and oral understanding. Ingraham-Edgren's Spanish Grammar and Fontaine's Flores de España.

First semester; first section, 8:00; second section, 11:00; Mr. GILBERT, 13 W.

42. Modern Spanish. (5 Hrs.) Reading and study of three or four works selected from the following authors: Perez Galdós, Palacio Valdés, Valera, Alarcón, Blasco Ibáñez. Composition and conversation.

Second semester; first section, 8:00; second section, 11:00; Mr. GILBERT, 13 W.

43. Commercial Spanish. (3 Hrs.) Business correspondence and commercial terms; conversation in Spanish on topics relating to travel, daily life and questions of present interest. Themes, collateral reading and reports.

First semester; M. W. F., 9:00; Mr. GILBERT, 13 W.

44. Classic Drama and the Age of Cervantes. (3 Hrs.) Critical reading of selected works of Lope de Vega and Calderón and of extracts from Cervantes' Don Quijote de la Mancha. Papers on the lives, works and times of these authors.

Second semester; M. W. F., 9:00; Mr. GILBERT, 13 W.

45. Drama of the Nineteenth Century. (2 Hrs.) Reading and study of some of the principal works of such modern Spanish authors as Moratín, Núñez de Arce, Echegaray, Ayala, Avellaneda..

First semester; T. Th., 9:00; Mr. GILBERT, 13 W.

46. Spanish Composition and Conversation. (2 Hrs.) Themes based on phases and incidents of daily life. Conversation and narration based on anecdotes and short stories both original and from texts.

Second semester; T. Th., 9:00; Mr. GILBERT, 13 W.

47. Early Spanish Drama. (3 Hrs.) Open only to graduate students. Study of the drama from its most remote origin to the time of Lope de Vega, reading of works illustrating its early development. (Omitted 1917-18).

First semester; M. W. F., hours to be arranged; Professor STATHERS, 11 W.

48. Early Spanish. (3 Hrs.) Open only to graduate students. Study of the literature in the first centuries of its development, reading of the Cid. (Omitted 1917-18).

Second semester; M. W. F., hours to be arranged; Professor STATHERS, 11 W.

STEAM AND GAS ENGINEERING.

Credit will be given in the College of Arts and Sciences for course 121 in themodynamics, 122 in heat engines, and 127 in heating and ventilating offered in the College of Engineering. For detailed announcements of these courses see page 184.

ZOOLOGY.

Professor REESE and Mr. HUNT.

NOTE.—For description of zoological laboratories see page 25.

The courses in this department are intended to serve as a means of general culture and to prepare students to become investigators and teachers of zoology. A wide field is offered for investigation in the organization, functions, habits, and evolution of animal life. Upon the results of such investigations rest to a large extent the sciences of medicine, psychology, and sociology. Courses 1, 2, 9, and 10 are of especial interest to teachers. Courses 1 and 2 are required of students in the medical course.

1. Animal Biology. (4 Hrs.) A study chiefly of invertebrate animals, with an introduction to the vertebrates. Hegner's College Zoology. Laboratory fee, $3.00.

First semester; recitation, T. Th., 8:00, or T. Th., 9:00; laboratory, first section (primarily for students in agriculture), M. W., 2:00-4:30; second section, T. Th., 2:00-4:30; third section, F., 2:00-4:30; S., 8:30-11:00; Professor REESE, Mr. HUNT and assistants, 49 and 50 W.

2. Vertebrate Zoology. (4 Hrs.) Dissection of the dogfish, frog, and cat. Lectures and recitations upon the biology, comparative anatomy, and evolution of vertebrates. Prerequisite: Zoology 1 or an equivalent. Laboratory fee, $3.00.

Second semester; recitation, T. Th., 8:00, or T. Th., 9:00; laboratory, first section (primarily for students in agriculture), M. W., 2:00-4:30; second section, T. Th., 2:00-4:30; third section, F., 2:00-4:30, S., 8:30-11:00; Professor REESE, Mr. HUNT and assistants, 49 and 50 W.

6. Vertebrate Embryology. (3 Hrs.) Cleavage, gastrulation and the formation of germ layers are studied in the frog and chick; the development of organs in the chick and pig. These materials are

human embryos. Reese's Vertebrate Embryology. Prerequisite: course 2 or an equivalent. Laboratory fee, $3.00.

First semester; T. Th., 2:00-5:00; Professor REESE, 50 W.

9. Methods of Zoology. (2 or 3 Hrs.) A practical course in the methods of collecting, preserving, injecting, making microscopic preparations, etc. Prerequisite: courses 1 and 2 or an equivalent. Laboratory fee, $2.00 or $3.00.

First and second semester; hours to be arranged; Mr. HUNT, 51 W.

10. Principles of Biology. (3 Hrs.) This course deals with the conditions of animal life and the means of adaptation; habits, reactions, food relations, coloration, regeneration, etc.; the course of organic evolution; eugenics; theories regarding the origin of species, heredity, etc. Lectures, recitations and assigned readings. Prerequisite: Zoology 1 or an equivalent.

Second semester; M. W. F., 11:00; Professor REESE, 49 W.

15. Comparative Anatomy, Histology, and Embryology. (Credit in proportion to work done.) An advanced course; to be taken ordinarily only after all of the preceding courses have been completed. Laboratory fee $2:00 to $3:00.

First and second semesters; hours to be arranged; Professor REESE and Mr. HUNT, 51 W.

19. Current Literature. (1 Hr.) Open to seniors and graduate students. The purpose of this course is to familiarize the student with the character of the work that is being published in the best known American and foreign zoological journals.

First and second semesters; hours to be arranged; Professor REESE, 51 W.

20. Research Work. (Credit in proportion to work done.) Properly qualified students may undertake research work upon the anatomy or physiology of animals. Primarily for graduates.

First and second semesters; hours to be arranged; Professor REESE and Mr. HUNT, 51 W.

21. Economic Zoology. (2 Hrs.) A brief survey of the more important representatives of all the groups of animals that are economically beneficial or injurious to man. Lectures, recitations, assigned readings and laboratory study. Laboratory fee, $1.00.

Second semester; T., 11:00; Th., 10:00-12:00; Professor REESE, 50 W.

NOTE.—For courses in entomology see page 220.

THE COLLEGE OF ENGINEERING AND MECHANIC ARTS

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

CLEMENT ROSS JONES, B.S.C.E., M.M.E., *Dean and Professor of Steam and Experimental Engineering*

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., *Professor of Mechanics and Applied Mathematics*

RUSSELL LOVE MORRIS, C.E., *Professor of Railway and Highway Engineering*

EDWIN FAYETTE CHURCH, JR., M.S., in M.E., *Professor of Machine Design and Construction*

EDWARD NATHAN ZERN, B.S., E.M., *Professor of Mining Engineering*

ROLAND PARKER DAVIS, M.C.E., PH.D., *Professor of Structural and Hydraulic Engineering*

ALEXANDER DENNIS WILLIAMS, *Chief Engineer of the State Road Bureau and Director of School of Good Roads*

JOHN BEHNY GRUMBEIN, M.M.E., *Professor of Steam and Experimental Engineering*

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering*

SIMEON THOMPSON HART, M.E., *Assistant Professor of Machine Construction and Superintendent of Shops*

ARTHUR A. HALL, B.S.M.E. (Elect.) *Assistant Professor of Electrical Engineering*

JULIUS J. BOURQUIN, B.S., *Assistant Professor of Mining Extension Work*

ALEXANDER B. GRAY, B.S., *Assistant Professor of Mining Extension Work*

GEORGE WALTER GROW, B.S.M.E., *Instructor in Drawing and Machine Design*

GEORGE MORRIS OSBORN, B.S.C.E., *Instructor in Sanitary Engineering and Surveying*

RAYMER EGBERT SEAMAN, *Instructor in Woodworking and Foundry Practice*

RUFUS ASA WEST, *Instructor in Metalworking and Stationary Engineer*

CARL HENRY CATHER, B.S.M.E., *Instructor in Drawing and Machine Design*

DANIEL H. PERDUE, *Instructor in Mining Extension Work*

E. BLAINE KING, *Instructor in Mining Extension Work*

MAX CARLETON NELSON, *Assistant in Drawing*

*THOMAS JACOB EAGLEN, *Assistant in Foundry Practice*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

SAMUEL B. BROWN, A.M., *Professor of Geology and Mineralogy*

JOHN ARNDT EIESLAND, PH.D., *Professor of Mathematics*

CHAUNCEY WILLIAM WAGGONER, PH.D., B.S.C.E., *Professor of Physics*

JOSEPH ELLIS HODGSON, PH.D., *Professor of Mathematics*

FRIEND EBENEZER CLARKE, PH.D., *Professor of Chemistry*

DAVID DALE JOHNSON, A.M., *Associate Professor of English*

WILLIAM ARMSTRONG PRICE, JR., PH.D., *Assistant Professor of Geology*

HUBERT HILL, M.S., *Assistant Professor of Chemistry*

MARGARET BUCHANAN, A.B., *Instructor in Mathematics*

CHARLES MOON, B.S.C.E., *Instructor in Physics*

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*A practical foundry man is employed each year for the time the foundry is in operation.

HUBERT MILO FREEMAN, A.B., *Instructor in Physics*

EDWARD MACK, PH.D., *Instructor in Chemistry*

SAMUEL MORRIS, M.A., *Instructor in Chemistry*

DANIEL FRANCIS CRONIN, *Student Assistant in Electrical Construction*

LEON HOVSEP BOGHOSIAN, *Student Assistant in Electrical Construction*

FRANK McCAIN BREWSTER, *Student Assistant in Forging*

RALPH S. MARSHALL, B.S., *Secretary*

FACULTY COMMITTEES.

STUDENTS COURSES AND HOURS: Dean JONES and Professors GRUMBEIN and ZERN.

ENGINEERING CURRICULA: Dean JONES, Professors MORRIS, CHURCH, DAVIS, ZERN, and FORMAN.

ENGINEERING SOCIETY: Professors EMORY, MORRIS, GRUMBEIN, FORMAN, and Associate Professor JOHNSON.

LIBRARY: Professors CHURCH and DAVIS.

ORGANIZATION.

The College of Engineering contains the following departments:
Chemical engineering.
Electrical engineering.
Machine design and construction.
Mechanics and applied mathematics.
Mining engineering.
Railway and highway engineering and surveying.
Steam, gas, and experimental engineering.
Structural and hydraulic engineering.
Summer school of mines.
School of good roads.
Mining extension.

BUILDINGS AND EQUIPMENT.

All instruction in engineering subjects is centralized in Mechanical Hall. The new annex to this building practically doubling its former capacity was opened in the fall of 1916. This gives room for extension and for increased facilities and for new equipment which is being added as rapidly as possible. Mechanical Hall is located on the southeast corner of the campus and fronts the athletic field. In it are the lecture, recitation, drawing, and instruction rooms of the various engineering departments, the shops, the engineering laboratories, and the power plant. The drawing rooms, shops, power plant, and laboratories are equipped with modern apparatus and machinery for practical and experimental work.

The annex provides new commodious and well lighted drawing rooms and shops; recitation, laboratory and model rooms for the Departments of Geology, Machine Design and Construction, and Electrical Engineering; offices for the State Geological Survey, a mining museum and an additional mechanical laboratory. The rooms vacated in the old building provide for a new oil and gas laboratory, a new mining and highway laboratory, an extension to the electrical laboratory, departmental drawing rooms for advanced students, additional lecture rooms and office and drawing rooms for the State Road Bureau.

In the drawing rooms are collections of models of bridges, furnaces, structures, mechanisms, engines, pumps, valves and valve gears; descriptive geometry models; sets of charts, state and government maps, surveys, photographs, engineering specifications, drawings,

tracings, and blue prints. In connection with the drawing rooms there is a blue printing and photographic room and dark closet, equipped with electric and sun printing apparatus and photographic outfit.

The shops consist of a woodworking shop, forge shop, foundry, machine shop, and sheet metal and pipe fitting shop. Each work shop occupies a separate room and is independently equipped with suitable benches, measuring instruments, tools, shop appliances, and machines, such as are ordinarily installed in the larger engineering colleges and commercial shops. These afford ample facilities for performing all the fundamental operations in machine construction and for building machines of moderate size.

The power plant equipment consists of different types of steam and gas engines, direct-connected or belted to electric generators; a 100 K. W. Westinghouse condensing steam turbine direct-connected to a direct current generator; a 50 h.p. motor-generator set; steam boilers, equipped for burning both gas and coal; an independently-fired superheater equipped with temperature controller; pumps, condensers, air compressors, steam traps and other auxiliary apparatus, providing the means for furnishing any desired kind of power.

The engineering laboratories are supplied with standard gauges, measuring, calculating, and recording instruments; apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic, electrical and mining engineering.

The testing laboratory is equipped with apparatus and machines for testing cement, iron, steel, brick, stone, and other materials of engineering. The principal machines and apparatus are an Olsen testing machine of 400,000 pounds capacity, taking tension and compression specimens up to six feet, and beams up to sixteen feet in length; a 50,000 pound Riehle testing machine; a 20,000 pound Riehle automatic and autographic testing machine; a 10,000 pound Olsen transverse testing machine; a 60,000 inch-pound Riehle-Miller torsion machine; one Olsen and two Fairbanks cement testers; Brinnell and Shore hardness testers; a standard abrasion cylinder; a stone saw; besides smaller apparatus for testing cement, lubricating oils, and extension and deflection of materials.

The mechanical and steam laboratories contain small steam and gas engines, a compound air compressor with electrical and mechanical control, Westinghouse air brake apparatus, rotary air motors, a hot air engine, a passenger locomotive, direct steam driven ventilating and power driven fans, dynamometers, friction brakes, condensers, injectors and ejectors, steam and gas engine indicators, revolution counters, planimeters, anemometers and apparatus for testing pressure gauges, indicator springs, thermometers, venturi meters and nozzles for measuring flow of air and steam, etc. These

are supplemented by the power plant equipment previously described, which affords facilities for steam and gas engine trials and boiler tests with larger units, and also provides facilities for various lines of experimental investigation.

The electrical laboratory is provided with a number of small compound, shunt and series-wound direct current generators and motors, ranging from 2½ to 20 kilowatt, two and three-phase alternating current generators and motors of frequencies from 20 to 133 cycles, and capacities ranging from 2 to 20 kilowatt; rotary converter and motor generator sets; an 8-horse-power variable speed Stow motor, driving a 5-kilowatt, 2-phase, 220-volt, 10 pole alternator, which may give any frequency from 40 to 133 cycles; a 3-horse-power inter-pole motor; a 3-horse-power Thompson-Ryan variable speed motor, which, driving a small alternator, affords frequencies from 15 to 60 cycles; a revolving field, 7½ K. W. General Electric alternating current generator, wound to give from one to twelve phases; a Holtzer-Cabot, 5-horse-power induction motor set with interchangeable rotors; a 5-horse-power Lamme series, single-phase motor; a 3-horse-power self-starting, Century, single-phase induction motor; a 5-horse-power General Electric, split-phase motor; a 10-horse-power Stanley 2-phase induction motor equipped with compensator, condenser, and transformers; a 10-horse-power Spargue electric dynamometer; a 30 ampere General Electric Mercury-Arc Rectifier and storage battery equipment; various types of Cutler-Hammar and other speed regulating and controlling apparatus; reactances, static, auto and constant-current transformers; a welding transformer; a high potential transformer for testing insulation, etc.; a Thodarson set of experimentay apparatus for demonstrating many of the principles of electricity; a Queen & Co.'s testing set, with standards of capacity, induction and resistance, and with a potentimeter and standard cell, for standardizing electrical instruments; a General Electric oscillograph with accessories; standard and commercial indicating and recording measuring instruments; synchronism and power-factor indicators; dynamometers; fluxmeter; galvanometers; tachometers and speed counters; rheostats of various types and capacities; and eight distributing switchboard panels. The electric railway equipment consists of a car truck, with motors, mounted on a dynamoter; air brake outfit; three types of control equipment and a switchboard panel with indicating and recording instruments. This is supplemented also by the larger generating and controling units in the power plant.

The hydraulic laboratory equipment consists of a compound duplex steam pump supplying water to a closed steel pressure tank, from which run headers arranged for the insertion of orifices, nozzles, and pipes supplying the various hydraulic motors; concrete storage

tanks; measuring tanks and weighing scales; cascade water wheel; Venturi meter, water meter, steel weir-box, weir-guages, and other minor measuring and controlling apparatus.

The road material testing laboratory equipment consists of standard abrasion cylinder for testing paving brick; a standard three-gang motor driven Deval abrasion cylinder; motor driven ball mill; briquette machine; core drill; motor driven grinding lap and stone saw; motor driven "Dorry" hardness testing machine; standard Page impact tester, with anvil for cementation tests; road-making tools; Braun planetary pulverizer; Dulin roterex; motor driven sieve shaker; etc.

The mining laboratory is equipped with drills, coal cutting machinery, air receiver, etc.; leading types of mine rescue apparatus, pulmotor, smoke chamber for use in training with rescue apparatus, devices for demonstrating the explosibility of coal dust, the William Clifford-James T. Beard collection of safety lamps, device for showing the length of cap with varying percentages of methane in mine air, models showing methods of working anthracite and bituminous seams of coal, small mine fan for experimental use in the study of mine ventilation, recording barometer, hygrometer, etc.

The metallurgical laboratory is especially equipped for the study of fuels, such as coal, coke, gas and oil. In part it comprises analytical balances, Cary combination gas furnace, electric drying oven, water still, Emerson and Parr fuel calorimeters, apparatus for the analyses of gases, apparatus for the proximate analysis of coal and for determining the coking properties of coal, etc.

The oil and gas laboratory is provided with equipment for the determining the physical and chemical properties of oils and gases, as follows: Junker calorimeter, Emerson calorimeter, Saybolt Standard Universal viscosometer, Pensky-Martin flash point apparatus, colorimeter, apparatus for heat test, fire test, cold test and emulsion test; Baume hydrometers; apparatus for the determination of carbon residue in oils; the estimation of gasoline content per 1000 cubic feet of natural gas, etc., etc.

Transits, levels, compasses, etc., are provided for the use of students in land and mine surveying and in highway and railway construction.

The latest trade literature, catalogues, and reports of commercial developments in engineering are kept in classified files for students' reference. The University library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies, and current issues and bound volumes of the principal scientific and technical periodicals.

FACILITIES FOR PRACTICAL OBSERVATION.

The University is located in a region which affords the student unusual opportunities for practical observation and education in engineering. Morgantown is situated practically at the edge of three extensive coal regions; the Fairmont, the Deckers' Creek and the Connellsville fields. The nearest large workings in the Pittsburg coal seam are within a mile of the University, and the nearest in the Upper Freeport vein are only four miles away. Connellsville is only forty-five miles distant from Morgantown, and Pittsburgh, the center of the world's greatest iron and steel industries, is 103 miles distant.

West Virginia's gas and oil districts approach within four miles of Morgantown and supply fuel for numerous factories. There are extensive brick works; twelve glass factories, producing pressed, plate, cut, window and bottle goods; two pumping stations, the Pure Oil Company's plant to the north of the city and the Standard Oil Company's plant to the south; the Sabraton plant of the American Sheet and Tin Plate Company; the Morgantown and Kingwood Railroad Shops; the Chrisman and Goodwin Foundry plant; the Morgantown Printing and Binding Company, and the factory of the Barley Foods Company.

At Manheim, on the M. & K. R. R., is located the Manheim Portland Cement works with a capacity of 1200 barrels a day; at Greer, an extensive limestone crushing plant, and at Sturgisson, the leading glass sand industry of this section.

ENGINEERING SOCIETY.

The Engineering Society is conducted by the students of the College of Engineering under the direction of a faculty committee. The society meets bi-weekly for the discussion of scientific subjects. All engineering students are urged to join the society immediately upon entrance to the college and to perform such work as its rules require. Students taking any of the four-year curricula leading to the baccalaureate degrees in engineering are required to engage actively in the work of the society during the third and fourth years. A credit of one hour will be given for the work of each of the last two years.

ENTRANCE REQUIREMENTS.

ADMISSION TO REGULAR CURRICULA.

The subjects and number of units in each required for admission to the regular four-year engineering curricula are as follows:

English	3
One foreign language	2
Algebra	1½
Plane and solid geometry	1½
Physics with laboratory	1
History	1
Elective	5
Total	15

Students are recommended to offer for entrance two units in German and one unit in French. In exceptional cases, students entering with fifteen or more units who are deficient in foreign language may be required to make up only such deficiencies as can be arranged along with the regular four-year course.

The electives may be selected from the following list:

Drawing (free hand and mechanical)	1 to 2 units
French	1 to 3 "
German	1 to 3 "
Latin	1 to 4 "
Greek	1 to 3 "
Mathematics	½ to 1 "
Science	1 to 3 "
Social science (including history, civics and economics	1 to 3 "
Vocational subjects (including commercial subjects and manual training)	1 to 3 "

A detailed statement of work required for each unit is given on page 58.

ADMISSION WITH ADVANCED STANDING.

Students from other institutions will be given credit work already done in accordance with the general rules for advanced standing, but at least one year of resident work will be required for any of the baccalaureate degrees in enginering.

ADMISSION AS SPECIAL STUDENTS.

Students desiring to take special work in the College of Engineering and Mechanic Arts are required to conform to the general regulations of the University regarding special students. (See page 32.)

Such students must give satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree or to take a regular curriculum in engineering, they must pass the required entrance examination for that year.

CLASSIFICATION OF STUDENTS.

To be classified as a freshman in the College of Engineering a student must have credit for at least twelve units of entrance requirements; to be classified as a regular freshman he must have fulfilled all entrance requirements. To be classified as a sophomore he must have credit for twenty-six hours of college work; as a junior, sixty-four hours; as a senior, one hundred and four hours.

CREDIT FOR WORK DONE IN ABSENCE.

Students of the College of Engineering under exceptional circumstances are permitted to apply for advanced standing for not more than a total of six hours credit for practical work in the following subjects done in the field, shops, or drafting room, during vacation or other periods of absence from the University: Woodworking (courses 1, 2, and 3), pattern making (4), foundry practice (5), forging (7), shop work (9), pipe fitting (10), machine tool work (13 and 14), machine construction (15), electrical construction (18), mechanical drawing (20, 22, 24, and 25).

To obtain credit application must be made before the work is begun, and a daily record kept of the work done. A certified statement of work done signed by the employer accompanied by a full report prepared by the applicant, must be filed with the Dean of the College on or before October 1st. Rules of procedure and application blanks may be obtained from the Dean.

In order to obtain credit for Summer Practice 164, the same rules of procedure apply. This course will be required for students entering after July 1st, 1917, but will be optional for students entering prior to that date.

UNDERGRADUATE CURRICULA.

The following curricula are offered for undergraduate students in the College of Engineering:

1. A four-year curriculum leading to the degree of Bachelor of Science in Civil Engineering, with option in sanitary engineering.
2. A four-year curriculum leading to the degree of Bachelor of Science in Mechanical Engineering.
3. A four-year curriculum leading to the degree of Bachelor of Science in Electrical Engineering.
4. A four-year curriculum leading to the degree of Bachelor of Science in Engineering of Mines, with options in coal mining and oil and gas engineering.
5. A four-year curriculum leading to the degree of Bachelor of Science in Chemical Engineering.

REQUIREMENTS FOR DEGREES.

To receive any of the baccalaureate degrees conferred in the College of Engineering the student must have satisfied all the entrance requirements and must have received credit for one hundred and forty-eight semester hours, including a summer term equivalent to five semester hours, three of which shall be in residence and two hours in outside practice. The particular curriculum and distribution of work is prescribed for each degree as stated below.

No student is permitted to register for less than fifteen or more than twenty hours of work in any one semester.

THESES.

Every candidate for a baccalaureate or graduate degree in engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. It must be fully elaborated and accompanied by the necessary working drawing or models required for the proper elucidation of the subject of the thesis. With its accompanying drawings it will be presented for approval, first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis, prepared according to official specifications for theses and signed by the instructor in charge and the head of the departments, must be placed in the University library before graduation. A small fee is charged for binding.

CIVIL ENGINEERING.

The course in civil engineering has been planned so that the student will get a substantial foundation for the work of the civil engineer. Emphasis is placed on the subjects underlying the science of engineering, such as physics, mathematics, etc., and these subjects are presented to the engineering students, not as an end in themselves, but as a means for the solution of engineering problems. The professional subjects are taught by means of recitations, lectures, drawingroom work, laboratory work and field work.

Civil engineering includes topographical and geodetic engineering, which has to do with the measurement of land surfaces; railroad and highway engineering, comprising the construction and maintenance of railroad lines and highways and the economic features governing them; municipal engineering, comprising the construction of sewers, water-works, etc., structural engineering, comprising the construction of buildings, bridges, foundations, docks, walls, piers, and other fixed structures; and hydraulic engineering, comprising the development of water power, the transference of water from place to place, etc. The field is so broad that no man can ever become an expert over its whole extent, but fortunately all of these various branches rest upon a very small body of principles, and the student is not forced to specialize until he enters active practice.

In addition to the Sanitary Option, outlined below, the student is offered the choice of two options in the second semester of the senior year, one of which devotes more time to the subject of railroad and highway engineering, the other to the subject of hydraulic engineering.

Optional Course in Sanitary Engineering.

Students in civil engineering who desire to specialize in sanitary engineering are permitted to make the following substitutions:

Chemistry 6, Quantitative analysis (4 hrs.) for Mechanism 29, 2 hrs.) and Mechanism drawing 30 (2 hrs.) in the second semester, second year.

Bacteriology 3, General bacteriology, (4 hrs.) for Economic geology 4 (3 hrs.) second semester, third year.

Chemistry 8, Organic quantitative analysis (5 hrs.) and thesis (3 hrs.) for Railroad economy 107 (2 hrs.) and Advanced structures 143 (3 hrs.)

An additional course in Bacteriology (2 hrs.) is arranged for the first semester, fourth year, to take the place of Tunneling 88 (2 hrs.)

UNDERGRADUATE CURRICULUM IN CIVIL ENGINEERING

Leading to the Degree of Bachelor of Science in Civil Engineering.

First Year—First Semester.

Rhetoric and comp. (Eng. 1)	3	
Advanced algebra (Math. 3)	3	
Plane trigonometry (Math. 4)	2	
Inorganic chemistry (Chem. 1)	4	
Military science (1)	1	
Mechanical drawing 20	2	
Shop work 9	2	17

First Year—Second Semester.

Rhetoric and comp. (Eng. 2)	3	
Analytical geometry (Math. 5)	3	
Trigonometry (Math. 6)	2	
Land surveying 100	3	
Inorganic chemistry (Chem. 2)	4	
Military Science (2)	1	
Mechanical drawing 22	2	18

Second Year—First Semester.

Descriptive geometry 26	3	
Advanced surveying 102	2	
General physics (Phys. 6, 7)	5	
Differential calculus (Math. 7)	3	
Military science (3)	1	
Qualitative analysis (Chem. 4)	2	
Mechanical drawing 25	2	18

Second Year—Second Semester.

Integral calculus (Math. 8)	3	
General physics (Phys. 8, 9)	5	
Topographical surveying 103	2	
Statics 70	3	
Mechanism 29	2	
Military science (4)	1	
Mechanism drawing 30	2	18

Summer work, Surveying 109—1
Summer work (out of residence), Summer practice 164—2

Third Year—First Semester.

Mechanics of materials 71	4	
Mechanical laboratory 130	2	
Railway location 104	3	
Steam and gas machinery 120	3	
General geology (Geol. 2)	3	
Applied electricity 51	3	
Engineering Society 162		18

Third Year—Second Semester.

Kinetics 72	3	
Hydraulics 73	2	
Mechanical laboratory 131	2	
Railway maintenance 105	3	
Roofs and bridges 141	4	
Economic geology (Geol. 4)	3	
Engineering Society 162	1	18

Summer work, Railroad surveying 110—2

Fourth Year—First Semester.

Water supply engineering 149	3	
Sanitary engineering 148	3	
Masonry and foundations 146	3	
Bridge design 142	4	
Tunnelling 88	2	
Roads and pavements 106	3	
Engineering Society 163		18

Fourth Year—Second Semester.

*Railroad economy 107	2	4
and Highway eng. 108	2	
or *Hydraulic const. 150	3	
and Hydraulic meas. 151	1	
Contracts and specifications 161	2	
Concrete construction 147	4	
Advanced structures 143	3	
Thesis 113 or 152	3	
English (Eng. 14)	1	
Engineering Society 163	1	18

*Option selected should be announced at the beginning of the fourth year. For optional course in Sanitary Engineering see page 152.

MECHANICAL ENGINEERING.

The aim of the course in mechanical engineering is to give the student such mental equipment as will enable him to deal most effectively with general engineering problems. All possible practice is given in the work that an engineer is ordinarily called on to do, but greater stress is laid on a thorough knowledge of those underlying principles and methods which are the foundation of all engineering professions. This study occupies the first two and part of the third years. The remainder of the third year and all of the fourth are devoted to study of the applications of these principles and options are provided which will enable the student to specialize in accordance with his natural inclination.

The work in pure mathematics is terminated at the end of the first semester of the second year, and applications follow in the recitation room courses in mechanism, statistics, mechanics of materials, dynamics, and machine design. Steam engineering begins with the course in thermodynamics in the third year and is continued by the course in valve gears, heat engines and power plant design. A sufficient amount of electrical engineering is given in the third and fourth years to enable the student to handle engineering operations involving the simpler electrical problems.

Drafting room work is given throughout the four years, starting with elementary mechanical drawing in the first year. The courses in mechanism, valve gears, machine design and power plant design are accompanied by drawing room work, giving practical applications of the principles studied in the class room, and constant practice in the execution of drawings.

The engineering laboratories provide the students with practice in testing, handling and caring for a large variety of machinery, including steam, air, gas, hydraulic, material-testing and power-transmission machinery. One-half day a week is devoted to this work during the last two years.

The shop work, commencing in the first year, is planned to acquaint students with the fundamental tools and mechanical operations, to enable them to acquire a reasonable amount of manual dexterity, and to furnish them continuously with practical examples of the principles studied in their class room. A study is made of the methods used in manufacturing plants and engineering establishments, and to the principles of industrial management.

The thorough understanding of principles, the development of the reasoning faculty, and the knowledge of the sources to draw on for engineering information as it may be needed, are of the greatest importance, and take precedence over the mere acquisition of knowledge.

UNDERGRADUATE CURRICULUM IN MECHANICAL ENGINEERING

Leading to the Degree of Bachelor of Science in Mechanical Engineering.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Advanced algebra (Math. 3)	3		Analytical geometry (Math. 5)	3	
Plane trigonometry (Math. 4)	2		Trigonometry (Math. 6)	2	
Inorganic chemistry (Chem. 1)	4		Surveying 101	1	
Military science (1)	1		Inorganic chemistry (Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Woodworking 1	1		Mechanical drawing 22	2	
Forging 7	1	17	Foundry 5	2	18

Summer work, Machine shop 13—3

Second Year—First Semester.			Second Year—Second Semester.		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 7)	5		General physics (Phys. 8, 9)	5	
Descriptive geometry 26	3		Statics 70	3	
Military science (3)	1		Mechanism 27	2	
Qualitative analysis (Chem. 4)	2		Military science (4)	1	
Mechanical drawing 24	2		Mechanism drawing 28	2	
Pattern making 4	2	18	Machine work 14	1	
			Pipe-fitting 10	1	18

Summer work (out of residence), Summer practice 164—2

Third Year—First Semester.			Third Year—Second Semester.		
Mechanics of materials 71	4		Kinetics 72	3	
Thermodynamics 121	3		Hydraulics 73	2	
Elect. and mag. (Phys. 10)	3		Heat engines 122	3	
Valve gears 31	2		Shop methods 16	2	
Mechanical laboratory 130	2		Machine design 35	3	
Machine drawing 32	2		Mechanical laboratory 131	2	
Machine construction 15	2		Machine drawing 36	2	
Engineering Society 162		18	Engineering Society 162	1	18

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Power plant design 123	3		Contracts and spec. 161	2	
Engineering laboratory 132	2		Engineering laboratory 133	2	
Electrical engineering 53	2		Elements of elect. eng'g. 54	2	
Industrial management 46	1		English (Eng. 14)	1	
Steam engine design 39 or			Electrical laboratory 63	2	
Adv. machine design 37	2		Designing and drawing 41	2	
Structural engineering 144	2		Thesis 49 or 135	3	
Designing and drawing 40 or			Engineering Society 163	1	
Designing and drawing 38	4		Optional from following list	3	18
Electrical laboratory 62	2				
Engineering Society 163		18			

Power machinery 128	3		Machinery and mill work 42	3	
Steam turbines 125	3		Heating and ventilating 127	3	
Gas engineering 126	3		Steam boilers 124	2	
Hydraulic construction 150	3		Industrial engineering 47	3	
Gas engine design 45	3				

ELECTRICAL ENGINEERING.

The course in electrical engineering has as its object the imparting of that theoretical and practical training which will enable the prospective engineer to obtain a basic knowledge of the applications of electricity.

Since the electrical engineer must have the fundamental training of a mechanical engineer with specified knowledge of the properties of electricity, the course aims to parallel as far as possible the instruction given in mechanical engineering and to supplement that training with more extended instruction in electrical theory and its applications.

The work of the first two years of the course is largely preparatory to the technical training of the later two years. It is planned to give the requisite foundation in English, mathematics, physics, chemistry, drafting, and the elements of shop practice. Some of the fundamental principles of electricity and magnetism are studied in connection with physics.

The study of electrical engineering proper begins with the third year. In the first semester of this year the study of fundamentals of electrical engineering is begun. The theory is studied in class and is accompanied with practical investigations and experiments in the electrical laboratory. In the second semester this study is continued to include the design, construction, and operation of direct current machinery, and is accompanied by laboratory experiments to verify the principles studied. In addition to the purely electrical studies, the following supplementary subjects are taught throughout the year: thermodynamics and heat engines, mechanics, machine design and drawing, mechanical laboratory practice, and shop work.

The senior year is largely devoted to a study of the various commercial applications of electrical energy. The advanced theory of alternating currents, with its technical applications, is carefully considered. Alternating current machines, such as generators, transformers, motors, converters, etc., are treated in detail both as to design and performance. Instruction is given in power plant construction and operation, in transmission and distribution of electrical power, in electric traction and lighting, in telephonic and telegraphic principles, and in hydraulics. This work is also accompanied by both mechanical and electrical engineering practice, the solution of problems, and the preparing of engineering reports. The laboratory work is supplemented by directed inspection trips to plants of the city and by more extended trips to other cities.

UNDERGRADUATE CURRICULUM IN ELECTRICAL ENGINEERING

Leading to the Degree of Bachelor of Science in Electrical Engineering.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Advanced algebra (Math. 3)	3		Analytical geometry (Math. 5)	3	
Plane trigonometry (Math. 4)	2		Trigonometry (Math. 6)	2	
Inorganic chemistry (Chem. 1)	4		Surveying 101	1	
Military science (1)	1		Inorganic chemistry (Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Forging 7	1		Mechanical drawing 22	2	
Woodworking 1	1	17	Foundry 5	2	18

Summer work, Machine shop 13—3

Second Year—First Semester.			Second Year—Second Semester.		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 7)	5		General physics (Phys. 8, 9)	5	
Descriptive geometry 26	3		Statics 70	3	
Military science (3)	1		Mechanism 27	2	
Qualitative analysis (Chem. 4)	2		Military science (4)	1	
Mechanical drawing 24	2		Mechanism drawing 28	2	
Pattern making 4	2	18	Machine work 14	1	
			Pipe fitting 10	1	18

Summer work (out of residence), Summer practice 164—2

Third Year—First Semester.			Third Year—Second Semester.		
Mechanical laboratory 130	2		Mechanical laboratory 131	2	
Mechanics of materials 71	4		Kinetics 72	3	
Thermodynamics 121	3		Heat engines 122	3	
Valve gears 33	2		Direct current machinery 52	4	
Direct current theory 50	3		Machine design 35	3	
Machine drawing 34	2		Machine drawing 36	2	
Machine construction 15	2		Engineering Society 162	1	18
Engineering Society 162		18			

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Power plant design 123	3		Hydraulics 73	2	
Electrical laboratory 60	2		Electrical laboratory 61	2	
Engineering laboratory 132	2		Engineering laboratory 133	2	
Industrial management 46	1		Electric tract. and trans. 57	3	
Electrical light. and sig. 58	3		English (Eng. 14)	1	
Alternating currents 55	3		A. C. machinery 56	3	
Designing and drawing 59	3		Designing and drawing 41	2	
Thesis 69	1		Thesis 69	2	
Engineering Society 163		18	Engineering Society 163	1	18

MINING ENGINEERING.

Mining engineering deals with the processes and appliances used in the extraction of minerals from within the earth. A fundamental requirement in the beginning of any mining enterprise is a knowledge of the stratigraphy of the region and the indications of the presence or absence of mineral wealth. This makes necessary an understanding of the science of geology and mineralogy. For the purpose of confirming the impressions gained, prospecting naturally follows, and if the presence of a mineralized zone is established, plans for the winning of the mineral are made, buildings are erected, and the proper machinery to aid in the processes are installed. To meet these varied demands, the mining engineer must be broadly trained.

The first two years of the course in mining engineering are devoted to a thorough training in the underlying principles of mathematics, physics and chemistry. Supplementing these are courses in surveying, including mine surveying, English, drawing and shop work. For the last two years of the course two options are provided, one in coal mining and one in oil and gas mining. The student is permitted to state his choice of option at the beginning of the junior year.

COAL MINING.

In the coal mining option the study of coal mining is taken up in the third year. This study includes the geology and classification of coals, prospecting, breaking ground, lighting, ventilation of mines, preparation of coal for market, etc. The design of mine buildings and appliances is begun in the latter half of the year. A course in geology runs throughout the year. The study of steam engineering begins with the course in thermodynamics, and practice in the handling and care of instruments and machinery and in the solution of practical engineering problems is offered in the mechanical laboratories.

In the senior year the study of steam engineering is continued along with the subjects of electrical engineering, structural engineering and concrete construction. The course in mine design is continued from the latter half of the third year. In the mining laboratory the analyses of mine air and coals, the heat determination of coals, practice in the use of mine rescue apparatus, etc., are considered. The subject of mine explosions and their prevention is treated and in the concluding semester a course in mine management is framed to present the economic, social and financial considerations to be met in the successful management of a mining enterprise.

UNDERGRADUATE CURRICULUM IN MINING ENGINEERING (COAL MINING OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Advanced algebra (Math. 3)	3		Analytical geometry (Math. 5)	3	
Plane trigonometry (Math. 4)	2		Trigonometry (Math. 6)	2	
Inorganic chemistry (Chem. 1)	4		Land surveying 100	3	
Military science (1)	1		Inorganic chemistry (Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Shop work 9	2	17	Mechanical drawing 22	2	18
Second Year—First Semester.			**Second Year—Second Semester.**		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 7)	5		General physics (Phys. 8, 9)	5	
Descriptive geometry 26	3		Statics 70	3	
Advanced surveying 102	2		Mine surveying 80	3	
Military science (3)	1		Military science (4)	1	
Qual. analysis (Chem. 4)	2		Quan. analysis (Chem. 6)	2	
Mechanical drawing 25	2	18	Pipe fitting 10	1	18

Summer work, Surveying 109—1
Summer work, Mine surveying 90—2

Third Year—First Semester.			Third Year—Second Semester.		
Mechanical laboratory 130	2		Kinetics 72	3	
Mechanics of materials 71	4		Hydraulics 73	2	
Thermodynamics 121	3		Mechanical laboratory 131	2	
Coal mining 81	3		Coal mining 82	4	
General geology 2	3		Economic geology 4	3	
Elec. and mag. (Phys. 10)	3		Mine design and draw. 86	3	
Engineering Society 162		18	Engineering Society 162	1	18

Summer work (out of residence), Summer practice 164—2

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Power plant design 123	3		Concrete construction 147	3	
Structural engineering 144	2		English 1 (Eng. 14)	1	
Mine gases and explosions 83	3		Metallurgy 85	2	
Mine design and drawing 87	3		Metallurgy laboratory 96	1	
Elements of elect. eng'g. 53	2		Mine management 84	2	
Electrical laboratory 62	2		Mineralogy (Geol. 7)	2	
Mining laboratory 95	2		Thesis 99	2	
Thesis 99	1		Engineering Society 163	1	
Engineering Society 163		18	Electives (See note)	4	18

NOTE.—Electives to be selected from the following: Manufacture and properties of coke 91 (4 hrs.), Electrical engineering 54 (2 hrs.), Electrical laboratory 63 (2 hrs.), Hydraulic construction 150 (3 hrs.), Hydraulic measurements 151 (1 hr.).

OIL AND GAS PRODUCTION.

The course offered under this option is planned to furnish information on the essential features of oil and gas production; geology and chemistry therefore enter more largely into the curriculum than in the other engineering courses.

The junior year differs slightly from that given in the coal mining option in that chemistry is studied throughout the year and historical geology is added in the second semester.

In the senior year five courses pertaining to oil and gas are given. The course in geology aims to teach its practical application to well location. The oil and gas laboratory provides an opportunity for making tests on the physical and chemical properties of oils and gases while the remaining courses are intended to familiarize the student with the literature on the subject, the management of large enterprises, the extraction of the oil, valuation and reports on properties, etc.

Along with these subjects courses are offered in metallurgy, mineralogy, steam and electrical engineering, and concrete construction. The arrangement of the studies as a whole is such as to equip the prospective engineer with the information needed to pass judgment on the various problems as they arise.

UNDERGRADUATE CURRICULUM IN MINING ENGINEERING (OIL AND GAS OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Advanced algebra (Math. 3)	3		Analytical geometry (Math. 5)	3	
Plane trigonometry (Math. 4)	2		Trigonometry (Math. 6)	2	
Inorganic chemistry (Chem. 1)	4		Land surveying 100	3	
Mechanical drawing 20	2		Inorganic chemistry (Chem. 2)	4	
Military science (1)	1		Military Science (2)	1	
Shop work 9	2	17	Mechanical drawing 22	2	18
Second Year—First Semester.			**Second Year—Second Semester.**		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 7)	5		General physics (Phys. 8, 9)	5	
Descriptive geometry 26	3		Statics 70	3	
Advanced surveying 102	2		Mine surveying 80	3	
Military science (3)	1		Military science (4)	1	
Qual. analysis (Chem. 4)	2		Quan. analysis (Chem. 6)	2	
Mechanical drawing 25	2	18	Pipe fitting 10	1	18
Summer work, Surveying 109—1					
Mine surveying 90—2					
Third Year—First Semester.			**Third Year—Second Semester.**		
Mechanical laboratory 130	2		Kinetics 72	3	
Mechanics of materials 71	4		Hydraulics 73	2	
Thermodynamics 121	3		Mechanical laboratory 131	2	
Coal mining 81	3		Coal mining 82	4	
General geology (Geol. 2)	3		Quan. analysis (Chem. 7)	2	
Org. chemistry (Chem. 16)	3		Historical geology (Geol. 3)	4	
Engineering Society 162		18	Engineering Society 162	1	18
Summer work, Summer practice 164—2					
Fourth Year—First Semester.			**Fourth Year—Second Semester.**		
Power plant 123	3		Concrete construction 147	3	
Structural engineering 144	2		English (Eng. 14)	1	
Oil and gas geology (Geol.)	2		Metallurgy 85	2	
Applied electricity 51	3		Metallurgy laboratory 96	1	
Oil and gas laboratory 97	2		Oil and gas production 92	2	
O. and G. literature (Geol. 14)	1		Oil and gas laboratory 98	2	
Mineralogy (Geol. 6)	4		Thesis 99	2	
Thesis 99	1		Engineering Society 163	1	
Engineering Society 163		18	Electives (See note 1)	4	18

NOTE.—Electives to be selected from the following: Manufacture and properties of coke 91 (4 hrs.), Hydraulic construction 150 (3 hrs.), Hydraulic measurements 151 (1 hr.), Mineralogy (4 hrs.), Economic geology 4 (3 hrs.), Industrial chemistry 19 (3 hrs.).

NOTE 2.—For students interested mainly in field engineering, an equivalent amount of work in railway and highway engineering may be substituted for metallurgy, kinetics, thermodynamics and power plant design.

CHEMICAL ENGINEERING.

The object of the four-year course in Chemical Engineering is to qualify young men to design, build, and manage manufacturing plants in which the products of manufacture are based on chemical processes and to fit men for professional employment as industrial chemists and chemical engineers.

The curriculum outlined on the following page is designed to give the student a thorough knowledge of the fundamental principles of chemistry, a theoretical and practical training in mechanical engineering subjects including electrical engineering, and a thorough training in industrial chemistry and the more common engineering and industrial processes based on chemical reactions.

The course includes theoretical and analytical work in inorganic, organic and industrial chemistry, mathematics, physics, theoretical and applied mechanics, mechanical drawing, shop practice, structural engineering and industrial management, heat engineering, power plant design, electrical enginering, mechanical and electrical laboratory, sanitary engineering, mineralogy and metallurgy. The subjects included in the curriculum are those offered at the present time, but additional subjects in purely chemical engineering will be added later.

Students preparing to take the course in chemical engineering should present German for entrance. In order to provide time for a broader training in language, economics, history and science, and for additional courses in applied chemistry and engineering, students are recommended to take the combination Bachelor of Science and Engineering course. By a careful selection of electives both degrees may be secured in five years.

UNDERGRADUATE CURRICULUM IN CHEMICAL ENGINEERING

Leading to the Degree of Bachelor of Science in Chemical Engineering.

First Year—First Semester.			First Year—Second Semester.		
Rhetoric and comp. (Eng. 1)	3		Rhetoric and comp. (Eng. 2)	3	
Advanced algebra (Math. 3)	3		Analytical geometry (Math. 5)	3	
Plane trigonometry (Math. 4)	2		Trigonometry (Math. 6)	2	
Inorganic chemistry (Chem. 1)	4		Surveying 101	1	
Military science (1)	1		Inorganic chemistry (Chem. 2)	4	
Mechanical drawing 20	2		Military science (2)	1	
Woodworking 1	1		Mechanical drawing 22	2	
Forging 7	1	17	Foundry 5	2	18
Summer work, Machine shop 13—3					

Second Year—First Semester.			Second Year—Second Semester.		
Differential calculus (Math. 7)	3		Integral calculus (Math. 8)	3	
General physics (Phys. 6, 7)	5		General physics (Phys. 8, 9)	5	
Descriptive geometry 26	3		Statics 70	3	
Military science (3)	1		Mechanism 27	2	
Qual. analysis (Chem. 5)	4		Military science (4)	1	
Mechanical drawing 24	2	18	Mechanism drawing 28	2	
			Quant. analysis (Chem. 6)	2	18
Summer work, Summer practice 164—2					

Third Year—First Semester.			Third Year—Second Semester.		
Mechanics of materials 71	4		Kinetics 72	3	
Thermodynamics 121	3		Hydraulics 73	2	
Elect. and mag. (Phys. 10)	3		Quant. analysis . (Chem. 8)	5	
Mechanical laboratory 130	2		Machine design 35	3	
Organic chemistry (Chem. 16)	3		Mechanical laboratory 131	2	
Quant. analysis (Chem. 7)	3		Machine drawing 36	2	
Engineering Society 162		18	Engineering Society 162	1	18

Fourth Year—First Semester.			Fourth Year—Second Semester.		
Power plant design 123	3		Mineralogy (Geol. 7)	2	
Sanitary engineering 148 or Geology 2	3		Elements of elect. eng'g. 54	2	
			English (Eng. 14)	1	
Electrical engineering 53	2		Electrical laboratory 63	2	
Industrial management 46	1		Indust. chemistry (Chem. 19)	3	
Spl. chemistry (Chem. 15)	2		Metallurgy 85	3	
Structural engineering 144	2		Metallurgy 96	2	
Mineralogy (Geol. 6)	2		Thesis	2	
Electrical laboratory 62	2		Engineering Society 163	1	18
Thesis	1				
Engineering Society 163		18			

SUMMER TERM.

A summer term lasting six weeks is given immediately after the close of each collegiate year. The following regular engineering courses will be offered at that time: Woodworking 1, 2, 3, Forging 7. Machine tool work 13 and 14, Machine construction 15, Mechanical drawing 20, 22, and Surveying 109, Railroad surveying 110 and Mine surveying 90.

Surveying 109 is given during the first week (eight hours per day for six working days) and Railroad surveying continues for two weeks. Mine surveying 90 will follow Surveying 109 for two full weeks. Machine shop 13 may be completed by full time work covering the first three weeks or may be distributed over the full term of six weeks. Hours 8:00 to 12:00, 1:00 to 5:00 every week day except Saturday afternoon. Special hours for students taking less than full work will be arranged.

Students in mechanical and electrical engineering should take Machine tool work 13, three hours in the Summer Term following the freshman year.

This work, with that taken during the preceding freshman and the following sophomore collegiate years will enable students to fill positions in shops, factories, etc., during the two other vacations with better financial advantage and with far better results in the way of practical engineering experience than if the summer work is postponed until the second vacation. Students not taking the summer shop work in the first summer term will take Machine tool work 13 (1 hr.) during the sophomore year and will then take the remaining four hours of Machine tool work 13 and 14, during the second summer term.

Students in civil and mining engineering should take the residence courses in surveying at the time scheduled, but Summer Practice 164 may be taken out of residence during any vacation period.

Students who are regular in their work are urged to spend all their vacation periods in practical work, but students who are irregular or have conditions should so far as possible take advantage of the summer school to make up their deficiencies.

In cases where students have exceptional opportunities in the way of practical summer work in commercial machine shops and engineering corps, along the line covered by the University courses, credit will be given for such work, the amount to be determined after an examination of each individual case.

CURRICULA FOR GRADUATE STUDENTS IN ENGINEERING.

Graduate courses lead to the professional degrees of Master of Science in Civil Engineering, Master of Science in Mechanical Engineering, Master of Science in Electrical Engineering, and Master of Science in Engineering of Mines, respectively. They consist of advanced engineering courses aggregating twenty-four semester hours and a thesis, and require one year of resident study and work at the University.

A candidate for a professional degree is required to have completed the prescribed four-year curriculum of undergraduate study in that department of the college in which he proposes to take a degree, or to have completed such a curriculum or its equivalent at some other institutions of recognized standing, conferring the same or an equivalent baccalaureate degree. In the latter case, the diploma and other certificates of proficiency should be presented.

There is no fixed curriculum of subjects for any of these degrees, but the curriculum of study or investigation is arranged to suit the needs of each candidate, subject to the University regulations governing candidates for the master's degree as stated on page ..... Each candidate for a degree must select his major subject in the department in which his degree is to be taken and submit a thesis showing attainment in some phase of this subject.

PROFESSIONAL DEGREES FOR WORK IN ABSENTIA.

The University confers the following professional degrees: Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Enginer of Mines (E.M.), upon graduates of the College of Engineering of the West Virginia University on the basis of practical experience and study in absentia, the presentation of a thesis and an oral final examination.

To be eligible a candidate for a professional degree must have been in active practice of his profession for at least five years since receiving his first degree and must have been in responsible charge of important work for at least two years, and must be qualified to design as well as direct engineering work.

Application for registration as a candidate for a degree should be made not later than the first day of October in the year in which the degree is expected. Detailed regulations and registration blanks may be obtained from the Dean of the College of Engineering.

SPECIAL ENGINEERING CURRICULA.

1. Elective Groups for Students in other Colleges. Candidates for degrees other than engineering degrees, and special students in any department of the University, are permitted to elect subjects in the College of Engineering, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course of study before taking the engineering curriculum are advised to carry their mathematics as far as called for by the engineering curriculum, and to take some of their elective work in the College of Engineering. The engineering instructors will advise them what is best to elect.

Credits are given in the College of Arts and Sciences for the following engineering courses:

Subject	Credit Hours
Mechanical drawing 20-25, 28 or 30	8
Descriptive geometry 26	3
Industrial management 46, 47	4
Applied electricity 51	3
Elements of electrical engineering 53, 54	4
Direct current machinery 52	4
Theory of alternating currents 55	2
Alternating current machinery 56	3
Electrical laboratory 60, 61, 62, 63	4
Applied electricity in home and office 66	2
Statics 70	3
Mechanics of materials 71	4
Dynamics 72	3
Hydraulics 73	2
Metallurgy 85, 96	3
Land surveying 100 and 101	3
Thermodynamics 121	3
Heating and ventilating 127	3
Heat engines 122	3

In addition to the above the student may elect with the consent of his class officer, when his major subject is physics or education.

Engineering 1-18 (Mechanic arts)	10
Mechanical drawing 20-25, 28 or 30	3

2. Combined Science and Engineering Curriculum. The following course of study is suggested for students who expect to take an engineering degree after receiving the degree of Bachelor of Science, or who wish to take a general course with engineering subjects as a major.

English composition (English 1 and 2)	6	hrs.
English literature (English 26 and 27)	4	"
Algebra and trigonometry	7	"
Analytical geometry and calculus	9	"
Physics 6, 7, 8, 9	10	"
Mechanics 70, 71, 72	18	"
Chemistry 1, 2, and 4	10	"
Descriptive geometry	6	"
Mechanical drawing	4	"
One foreign language	20	"
Botany, zoology, geology, or entomology, any one	8	"
History, economics, or commerce, any one	8	"
Military science (when required)	4	"
Electives preferably in science and engineering that count toward both the bachelor of arts and engineering degrees	32	"
Total	128	

Students who expect to take a degree in civil engineering should include Geology 2 and 4, Land surveying 100, Mechanism 29, Mechanical drawing 25 and 30, Hydraulics 73, Applied electricity 51 and Shop work 9.

Applicants for a degree in mechanical or electrical engineering should include ten (10) hours in shop work, Mechanical drawing 24 and 28, Mechanism 27, Surveying 100, and Physics 10.

Applicants for a degree in mining engineering should include Geology 2 and 4, Chemistry 6, Land surveying 100, Physics 10, Mineralogy 98, Shop work 9 and Mechanical drawing 24.

By following the above curriculum students may receive both the B.S. degree and the engineering degree in five years.

3. Partial Curriculum. Students who have not the time or are otherwise unable to take a full curriculum, will be allowed to take a special or partial curriculum, consisting of such studies as they are prepared to take, provided that such curriculum shall have been approved by the class officer. For further information see statement of requirements for admission as special students.

4. Manual Training Courses. The first group consists of courses 1, and 7 in mechanical engineering. The second group consists of mechanical drawing, courses 20, 21, 22; and shop practice in wood and metal working, courses 1, 3, 5, 7, 9, 10, 13 and 14. These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational. The primary object is the training

of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction and these courses are therefore required of all students taking the full course in mechanical engineering.

5. Special Courses for Mechanics, etc. Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foreman in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as for the working up in the shops of original designs which have been approved by the head of the department. All students in mechanical engineering are recommended to take advantage of this provision and devote as much time as possible to shop and drawing-room practice.

COURSES OF INSTRUCTION.

In the following announcements, the name of the course is followed by its credit value in semester hours. A credit of one semester hour is given for a lecture or recitation course meeting one hour per week for one semester and requiring two hours of preparation for each lecture or recitation.

Credit for practical work in the shops, drawing rooms, laboratories and field, is given on the basis of the actual time required, including the preparation of reports and the writing of notes, three hours actual work counting as one recitation hour.

DRAWING, MACHINE DESIGN AND CONSTRUCTION.

1. Woodworking. (1 Hr.) For freshmen. Required of all candidates for engineering degrees. Instruction in carpentry; exercises with the fundamental edge tools in soft and hard woods and in making typical framed work; wood turning; face plate work; boring, finishing, and polishing.

First semester; section one, M. E. students, first half, T. Th., 2:00; section two, E. E. students, second half, T. Th., 2:00; conference, T., 11:00; Mr. SEAMAN, 203 M. H. (Also given in Summer Term).

2. Woodworking. (1 Hr.) Optional for candidates for degrees in the College of Agriculture. Includes instruction in carpentry; exercises with fundamental edge tools in soft and hard woods, with especial attention to the making of typical framed structures.

Second semester; T. Th., 8:00-10:00; Mr. SEAMAN, 203 M. H. (Also given in Summer Term).

3. Woodworking. Advanced work for special students, who are allowed to specialize along the lines of their choice. The amount of credits to be given depends upon the time spent in the shop and the progress of the student. Prerequisite: Woodworking 1 and 2.

Second semester; hours to be arranged; Mr. SEAMAN, 203 M. H. (Also given in Summer Term).

4. Pattern Making. (2 Hrs.) Required of all candidatses for degrees in electrical and mechanical engineering. The production of patterns for castings for machine construction and other work to be executed later in machine shop. Prerequisite: Woodworking 1, and Foundry 5.

First semester; section one, M. E. students, W., 2:00 and S., 8:00; section two, E. E. students, M. F., Mr. SEAMAN, 203 M. H.

5. Foundry (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. Selection, preparation and use of molding, facing and parting sands; use of typical molder's tools and appliances; cupola practice; solid and parted patterns, cored work, use of sweep, etc.; use of brass furnace and brass casting. Elementary pattern making.

Second semester; section one, M. Th., 2:00; section two, T. F., 2:00; section 3, W., 2:00, S., 8:00; conference T., 11:00; Mr. SEAMAN and Assistant, 1 M. H.

6. Foundry. Advanced work for special students. Continuation of Foundry 5.

Semester and hours to be arranged; Mr. SEAMAN, 1 M. H.

7. Forging. (1 Hr.) Required of all candidates for degrees in electrical and mechanical engineering. Use and care of forge, fire and tools; exercises in manipulation of iron and steel; making of typical tools for machine shop use; case hardening; use of power hammer; determination of quality of iron and steel.

First semester, section one, M. E. students, second half-semester, T. Th., 2:00; section two, E. E. students, first half-semester, T. Th., 2:00; conference, T., 11:00; Mr. WEST. 2 M. H.

Second semester; for agricultural students, W., 2:00, S., 8:00; Mr. WEST. 2 M. H.

8. Forging. Advanced work for special students. Continuation of Forging 7.

Hours to be arranged; Mr. WEST, 2 M. H.

9. Shop Work. (2 Hrs.) Required of all candidates for degrees in civil engineering and engineering of mines. Instruction in woodwork, forging, and machine shop practice.

First semester; M. F., 2:00; conference, 11:00; Assistant Professor HART, 101 M. H., Mr. WEST, 2 M.H., Mr. SEAMAN, 203 M. H.

Students will be assigned to sections for distribution among the three shops.

10. Pipe Fitting. (1 Hr.) Required of all candidates for degrees in electrical and mechanical engineering. Use of hand dies and pipe threading machines; drilling and tapping; making up joints and erection of pipe lines, riveting, caulking and tube expanding.

Second semester; section one, second half, M. Th., 2:00; section two, first half, M. Th., 2:00; section three, second half, T. F., 2:00; conference, W., 12:00; Mr. WEST, 4 M. H.

13. Machine Tool Work. (3 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. Hand work and elements of machine work; fundamental operations of lathe, drill press, planer, milling machine and grinder. Lectures and shop work.

Summer Term, 8:00 to 12:00, 1:00 to 5:00; Assistant Professor HART. 101 M. H. (This course is also given during the collegiate year; hours to be arranged).

14. Machine Tool Work. (1 Hr.) Required of all candidates for degrees in electrical and mechanical engineering. Continuation of Machine tool work 13, which is a prerequisite. Advanced work on planer, milling machine, and grinder. Lectures and shop work.

Second semester; section one, first half, M. Th., 2:00; section 2, second half, M. Th.. 2:00; section three, first half, T. F., 2:00; conference, W., 12:00; Assistant Professor HART, 101 M. H.

15. Machine Construction. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. Continuation of Machine tool work 14, with special attention to assembling, fitting and erecting of machines. Study of principles of heat treatment. Lectures and shop work.

First semester; section one, M., 2:00, S., 8:00; section two, T. F., 2:00; conference, M., 8:00; Assistant Professor HART, 101 M. H.

16. Shop Methods. (2 Hrs.) Required of all candidates for degrees in mechanical engineering. Continuation of Machine construction 15. Study of machine and other shop methods for limited and wholesale production, use of jigs and templates and of special machines and processes; work shop appliances in general; cost of machine work. Shop and laboratory work; lectures, inspection trips, reading, etc.

Second semester; T. Th., 9:00; Assistant Professor HART, 104 M. H.

17. Machine Construction. Advanced work for special students. Continuation of Machine construction 15 and Shop methods 16.

Hours to be arranged; Assistant Professor HART, 104 M. H.

18. Electrical Construction. For special students and others wishing practical experience along electrical lines. Mechanical repairs to dynamos and motors, setting and adjusting of brushes; construction of switchboards and rheostats, winding coils; wiring for electric light, power and telephone service.

Hours to be arranged; Professor FORMAN and Mr. WEST, 24 M.H.

20. Mechanical Drawing. (2 Hrs.) For freshmen. Required of all candidates for engineering degrees. Care and use of drawing instruments, line exercises, geometric construction, plain lettering including proficiency in at least one style, orthographic projection, isometric projection.

First semester; section one, W., 2:00; S., 8:00; section two, M. F., 2:00; section three, T. Th., 2:00; Mr. GROW, Mr. CATHER, and Mr. NELSON, 212 M. H.

21. Mechanical Drawing. (2 Hrs.) Primarily for students in home economics. Use of drawing instruments, practice in reading of drawings, designing and drawing of furniture and of room and house plans.

First semester; T. Th., 2:00; Professor CHURCH, 207 M. H.

22. Mechanical Drawing. (2 Hrs.) For freshmen. Required of all candidates for engineering degrees. Continuation of Mechanical drawing 20. Tracing and blue printing, engineering sketches and working drawings from models and parts of machines.

Second semester; sections one and four, T. F., 2:00; section two, W., 2:00, S., 8:00; section three, M. Th., 2:00; Mr. GROW, Mr. CATHER, and Mr. NELSON, 212 M. H. Sections one, two and three M. E. and E. E. students, section four, C. E. and E. M. students.

23. Mechanical Drawing. (2 Hrs.) Elective for students in agriculture. Use of drawing instruments, practice in reading of drawings, building plans, designing and drawing of framed structures and their details.

Second semester; M., 2:00, S., 8:00; Mr. GROW and Mr. CATHER, 212 M. H.

24. Mechanical Drawing. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. Continuation of Mechanical drawing 22. Engineering sketches and working drawings, building plans, assembly drawing of steam engine.

First semester; section one, M. E. students, M. F., 2:00; section two, E. E. students, W., 2:00, S., 8:00; Mr. GROW and Mr. CATHER, 212 M. H.

25. Mechanical Drawing. (2 Hrs.) Required of all candidates for degrees in civil engineering and engineering of mines. Continuation of Mechanical drawing 22. Drawing room conventions for representation of materials, details of topography, wooden framing, structural steel shapes and framing, etc., lettering of titles, map tracing.

First semester; W. F., 2:00; Mr. GROW and Mr. CATHER, 212 M. H.

26. Descriptive Geometry. (3 Hrs.) Required of all candidates for engineering degrees. Orthographic projection in the four quadrants; problems of the point; line and plane; tangencies; intersection of plane and curved surfaces; developments of single curved surfaces. Prerequisite: Mechanical drawing 20.

First semester; T. Th. F., 10:00; Professor MORRIS and Mr. GROW, 218 and 208 M. H.

27. Mechanism and Machinery. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. To accompany Mechanism drawing 28. Analysis and classification of mechanisms; diagrams of relative velocities of machine parts; transmission and change of motions by linkages, rolling contact, toothed

gearing, couplings, belts, cams, parallel and straight line motion. Lectures and recitations. Prerequisite: Mechanical drawing 22.

Second semester; W. F., 11:00; or W. F., 8:00; Mr. GROW and Mr. CATHER, 208 M. H.

28. Mechanism Drawing. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. To accompany Mechanism and machinery 27. Drawing and diagrams of mechanical movements, velocity diagrams, graphical solution of problems, design and drawing of gear teeth. Prerequisite: Mechanical drawing 22.

Second semester; sections one and two, T. F., 2:00; section three, M. W., 2:00; Mr. GROW and Mr. CATHER, 212 M. H.

29. Mechanism and Machinery. (2 Hrs.) Required of all candidates for degrees in civil engineering. To accompany Mechanism drawing 30. Brief course in analysis and classification of mechanisms; diagrams of motion and velocity, cams, gearing, belting, clutches, etc., followed by a study and analysis of mechanisms and machines used in the various branches of civil engineering construction; hoists, derricks, lifts, dredges, shovels and other excavating machinery, crushers, conveyors, etc.

Second semester; M., 10:00, W., 12:00; Mr. GROW, 208 M. H.

30. Mechanism Drawing. (2 Hrs.) Required of all candidates for degrees in civil engineering. To accompany Mechanism and machinery 29. Drawings and diagrams of mechanical movements, velocity diagrams, gear teeth. Prerequisite: Mechanical drawing 22.

Second semester; Th., 2:00, S., 8:00; Mr. GROW and Mr. CATHER, 212 M. H.

31. Valve Gears. (2 Hrs.) Required of all candidates for degrees in mechanical engineering. To accompany Machine drawing 32. Brief study of simple steam engine; use and comparison of valve diagrams, study of valves and gears in common use; analysis and design; gas engine valves and gears; governors. Lectures and recitations. Prerequisites: Mechanism and machinery 27 and 28.

First semester; M. F., 10:00; Professor CHURCH, 209 M. H.

32. Machine Drawing. (2 Hrs.) Required of all candidates for degrees in mechanical engineering. To accompany Valve gears 31. Valve diagram problems; designing and drawing of valves and gears for steam and gas engines; design of governor mechanism.

First semester; T. Th., 2:00; Professor CHURCH and Mr. GROW, 207 M. H.

34. Machine Drawing. (2 Hrs.) Required of all candidates for degrees in electrical engineering. To accompany Valve gears 33. Valve diagram problems for steam and gas engines, design of governor mechanism; assembly drawing of dynamo.

First semester; M. F., 2:00; Professor CHURCH and Mr. GROW, 207 M. H.

35. Machine Design. (3 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. To accompany Machine drawing 36. Elements of machine design, conventional and rational proportioning of parts; mechanics of machinery; influence of material and treatment on design. Prerequisite: Mechanics 71 and Mechanism and machinery 27 and 28.

Second semester; M. T. F., 10:00; Professor CHURCH, 209 M. H.

36. Machine Drawing. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. To accompany Machine design 35. Designing and drawing of machine elements and finally of complete machine.

Second semester; section one, M. E. students, M. W., 2:00; section two, E. E. students, T. F., 2:00; Professor CHURCH and Mr. GROW, 207 M. H.

37. Advanced Machine Design. (2 Hrs.) Optional for fourth year senior students in mechanical engineering. Continuation of Machine design 35. To accompany Designing and drawing 38. Graphical solutions of problems in machine forces; theory of elasticity; dynamics of machines, governors, reciprocating parts, fly-wheels, running balance, whirling of shafts, etc. Lectures and recitations.

First semester; M. F., 11:00; Professor CHURCH, 209 M. H.

38. Designing and Drawing. (4 Hrs.) Optional for fourth year students in mechanical engineering. To accompany Advanced mechine design 37. Designing practice of more advanced nature than that in Machine design 35, and involving principles studied in the class room work of Course 37.

First semester; M. T. Th. F., 2:00; Professor CHURCH, 207 M. H.

39. Steam Engine Design. (2 Hrs.) Optional for fourth year students in mechanical engineering. To accompany Designing and drawing 40. Detailed study of modern steam engine; comparison of rational and empirical formulæ. Dynamics of machines; governors, reciprocating parts and fly-wheels. Lectures and recitations. Prerequisites: Machine design 35. Valve gears 31 and Machine drawing 32.

First semester; M. F., 11:00; Professor CHURCH, 209 M. H.

40. Designing and Drawing. (4 Hrs.) Optional for fourth year students in mechanical engineering. To accompany Steam engine design 39. Use of empirical and rational formulæ; complete design and drawing of a steam engine of simple type so far as time will allow.

First semester; M. T. Th. F., 2:00; Professor CHURCH. 207 M. H.

41. Designing and Drawing. (2 Hrs.) Required of all candidates for degrees in electrical and mechanical engineering. Continuation in the drawing room of Power plant design 123. Making of the working drawings showing the location of boilers, engines, auxiliaries, piping. coal and ash handling machinery, etc.

Second semester; T. F., 2:00; Professor CHURCH. 207 M. H.

45. Gas Engine Design. (3 Hrs.) Optional for fourth year students in mechanical engineering. Calculations and drawings for gas engine, complete so far as time will allow. Prerequisite: Machine design 35.

Second semester; hours to be arranged; Professor CHURCH, 207 and 208 M. H.

46. Industrial Management. (1 Hr.) Required of all students in electrical and mechanical engineering. Elementary study of organization of industrial establishments, management, systems of payment, cost keeping, distribution of overhead expenses, determination of cost of production, etc.

First semester: M., 9:00; Professor CHURCH. 209 M. H.

47. Industrial Engineering. (3 Hrs.) Optional for fourth year students in mechanical engineering. Continuation of Industrial management 46, which is a prerequisite. Study of establishment, equipment and operation of the various types of industrial plants.

Second semester; M. W. F., 11:00; Professor CHURCH, 209 M. H.

49. Thesis. (3 Hrs.) For fourth year students in mechanical engineering. The working out of some special problems in design or construction or both. See general thesis requirements, page .....

Hours to be arranged; Professor CHURCH, 209 M. H.

ELECTRICAL ENGINEERING.

50. Direct Current Theory. (3 Hrs.) Primarily for third year students. Required for the degree of B.S.E.E. Elements of direct currents and accompanying phenomenon encountered in direct current generators and motors, and allied apparatus. Prerequisite: Physics 8.

First semester; Th. F., 10:00, W. 2:00; Professor FORMAN, 124 M. H.

51. Applied Electricity. (3 Hrs.) Primarily for the third year students in civil engineering. Required for the degree of B.S.C.E. Lectures and recitations accompanying laboratory practice. A brief course covering the principles and the most important industrial applications of electricity. Prerequisite: Physics 8.

First semester; T. Th., 11:00; Assistant Professor HALL. 114 M. H.; laboratory, M. or T., 2:00; Assistant Professor HALL, 24 M. H.

52. Direct Current Machinery. (4 Hrs.) Continuation of Direct current theory 50. Required for the degree of B.S.E.E. Principles underlying design, construction and operation of direct current machinery.

Second semester; M., 11:00; T. Th., 9:00; Assistant Professor HALL, 114 M. H.; laboratory, Th., 2:00; Assistant Professor HALL, 24 M. H.

53. Elements of Electrical Engineering. (2 Hrs.) A course for fourth year students in mechanical and mining engineering. Required for the B.S.M.E. and B.S.E.M. degrees. A general study of the generation, transmission, and the utilization of electrical energy. Prerequisites: Physics 10 and Calculus.

First semester; W. F., 9:00; Professor FORMAN, 124 M. H.

54. Elements of Electrical Engineering. (2 Hrs.) Continuation of Course 53. The industrial applications of electricity, with a consideration of the economic employment of systems of distribution and types of machines.

Second semester; M. F., 10:00; Professor FORMAN, 124 M. H.

55. Theory of Alternating Currents. (3 Hrs.) Open to fourth year and graduate students. Required for the degree of B.S.E.E. A mathematical and graphical treatment of periodic currents and accompanying prenomena. Accompanied by Electrical engineering laboratory 60. Prerequisite: Engineering 52.

First semester; M. W. F., 11:00; Professor FORMAN, 124 M. H.

56. Alternating Current Machinery. (3 Hrs.) Continuation of Engineering 55. Required for the degree of B.S.E.E. Principles of design, construction and operation of single and polyphase machinery. Accompanied by Electrical engineering laboratory 61.

Second semester; M. W. F., 11:00; Professor FORMAN. 124 M. H.

57. Electric Traction. (3 Hrs.) Primarily for fourth year students. Required for the degree B.S.E.E. A study of the equipment of electric railway installations with special treatment of transmission and signal systems for traction. Prerequisite: Engineering 55.

Second semester; M. W. F., 9:00; Assistant Professor HALL, 114 M. H.

58. Electrical Lighting and Power. (3 Hrs.) Open to fourth year and graduate students. Required for the degree of B. S.E.E. A study of the transmission, distribution and utilization of electricity for light, heat and power. Prerequisite: Engineering 52.

First semester; M. F., 10:00, W., 9:00; Assistant Professor HALL, 114 M. H.

59. Electrical Design and Drawing. (3 Hrs.) Primarily for fourth year students. Required for the degree of B.S.E.E. Designing and drawing of dynamos, motors, transformers, switchboards, etc. This course requires nine hours a week in the designing room. Prerequisite: Engineering 35 and 52.

First semester; M. W., 2:00; F., 9:00; Assistant Professor HALL, 207 M. H.

60. Electrical Engineering Laboratory. (2 Hrs.) Open to fourth year and graduate students. Required for the degree of B.S.E.E. Experimental study of the characteristics of alternating current machinery, investigations of transmission line constants and losses, tests of lighting systems, traction and power plant tests, etc. Prerequisite: Engineering 52.

First semester; T., 8:00; Professor FORMAN. 24 M. H.

61. Electrical Engineering Laboratory. (2 Hrs.) Continuation of course 60.

Second semester; T., 8:00; Professor FORMAN. 24 M. H.

62. Electrical Engineering Laboratory. (2 Hrs.) Primarily for fourth year students in mechanical and mining engineering. Required for the degrees of B.S.M.E. and B.S.E.M. Measurements in electrical machinery; switchboards; calibration; efficiences and characteristics of dynamos, motors, transformers and other electrical apparatus. To accompany Engineering 53. Prerequisite: Physics 10.

First semester; W., 2:00; Professor FORMAN. 24 M. H.

63. Electrical Engineering Laboratory. (2 Hrs.) Continuation of course 62. To accompany Engineering 54.

Second semester; W., 2:00; Professor FORMAN. 24 M. H.

64. Electrical Research. For graduate students only. Laboratory investigations in special lines of electrical studies.

Hours and credits to be arranged; Professor FORMAN. 124 M. H.

65. Electrical Engineering. Seminar work for graduate students. Special topics will be selected for study and discussion.

Hours and credits to be arranged; Professor FORMAN. 124 M. H.

66. Applied Electricity in Home and Office. (2 Hrs.) Primarily for students taking degrees not requiring higher mathematics. Meaning of common electrical terms; study of methods of charging for electrical energy; advantages to be derived in the economical use of electricity.

Second semester; T. Th., 11:00; Assistant Professor HALL, 114 M. H.

69. Thesis. (3 Hrs.) Required of candidates for the degree of B.S.E.E. Special investigation of original research on some topic relating to electrical engineering.

First and second semesters; hours to be arranged; Professor FORMAN. M. H.

MECHANICS AND APPLIED MATHEMATICS.

70. Statics. (3 Hrs.) Required of all second year engineering students. A study of the composition and solution of forces, by analytical and graphical methods; moments, couples, equilibrium, center of gravity and moment of inertia stresses in frames and jointed structures. Prerequisite: Integral calculus.

Second semester; T. Th. F., 10:00; Professor EMORY. 221 M. H.

71. Mechanics of Materials. (4 Hrs.) Required of all third year engineering students. Continuation of course 70. The strength of materials, resistance and elasticity of pipes, cylinders and rivited joints, cantilever and simple beams; strength of timbers, iron, steel, stone, concrete; elastic limits, factor of safety; design of simple structure. Prerequisite: Statics 70.

First semester; T. W. Th. F., 8:00; Professor EMORY. 221 M. H.

72. Kinetics. (3 Hrs.) Required of all third year engineering students. Continuation of Statics 70. Laws of motion in resisting medium, central forces, centrifugal force; pendulum and governor, impulse, work, energy, power modulus of machines, revolving masses, work of variable forces, duty of engines, impressed forces, motions of rigid bodies, fly-wheel, conservation of energy. Prerequisite: Static 70.

Second semester; T. Th. F., 8:00; Professor EMORY, 221 M. H.

73. Hydraulics. (2 Hrs.) Required of all engineering students. Theoretical pressure and energy of water; flow of water through orifices and tubes and over weirs; flow in conduit, pipes, canals, and rivers; current meters, water motor turbines. Prerequisite: Kinetics 72.

Second semester; M. W., 8:00; Professor DAVIS and Mr. OSBORN, 219 M. H.

75. Least Squares and Adjustment of Observations. (1 Hr.) Elective for fourth year and graduate engineering students. Errors of observation; principles of probability, least squares, probable errors of observation, errors in the mean, corrections of observations, normal equations, empirical formulæ. Prerequisite: Calculus.

First semester; hours to be arranged; Professor EMORY, 221 M. H.

76. Mechanics. (5 Hrs.) Includes Statics 70, and first half of Mechanics of materials 17.

First semester; 11:00; Professor EMORY, 221 M. H.

77. Mechanics. (5 Hrs.) Continuation of course 76. Includes last half of Mechanics of materials 71 and Kinetics 72.

Second semester; 11:00; Professor EMORY, 221 M. H.

MINING ENGINEERING.

80. Mine Surveying. (4 Hrs.) Primarily for sophomores. Required of all candidates for degrees in mining engineering. With this subject is included topographic surveying, location of outcrop, shaft plumbing, railroad curves, and the various systems of mine surveying and note keeping. The accuracy of the field work is tested by plotting the notes.

Second semester; M. W. F., 11:00, S., 8:00; Professor ZERN, 119 M. H.

81. Coal Mining. (3 Hrs.) Primarily for juniors. Required of all candidates for degrees in mining engineering. A study of the oc-

currence and composition of coal; prospecting, breaking ground, transmission of power to underground workings, coal cutting, explosives, blasting, shaft sinking, timbering and the various methods of working coal seams at home and abroad.

First semester; M., 8:00; T. Th., 9:00; Professor ZERN, 119 M. H.

82. Coal Mining. (4 Hrs.) Primarily for juniors. Required of all candidates for degrees in mining engineering. Treats of the various kinds of haulages in mines, the care of live stock, hoisting, pumping, ventilating, lighting, works at surface, preparation of coal for market, briquetting and coal washing.

Second semester; M. T. Th. F., 9:00; Professor ZERN, 119 M. H.

83. Mine Gases and Explosions. (3 Hrs.) Open to fourth year and graduate students. Required of all candidates for degrees in mining engineering. Mine air and mine gases; their generation, characteristics and behavior, the underlying causes of mine explosions; the coal dust theory; measures for the prevention of explosions; rescue work.

First semester; M. Th. F., 11:00; Professor ZERN, 119 M. H.

84. Mine Management. (2 Hrs.) Primarily for seniors. Required of all candidates for degrees in mining engineering. Mine economics, organiaztion and care of labor, mine accounting and cost keeping, valuation of properties, welfare movements, etc.

Second semester; T. Th., 10:00; Professor ZERN, 119 M. H.

85. Metallurgy. (2 Hrs.) Primarily for seniors. Required of all candidates for degrees in mining engineering. A course designed to give the student a working knowledge of the basic principles involved in the metallurgy of iron, steel, gold, silver, copper, zinc, lead and fuels.

Second semester; T. T., 11:00; Professor ZERN, 119 M. H.

86. Mine Design and Drawing. (3 Hrs.) Primarily for juniors. Required of all candidates for degrees in mining engineering. The application of the principles of construction to mine appurtenances such as powder magazines, supply houses, lamp houses, motor pits, tipples, stables, etc.

Second semester; W., 9:00, T. Th., 2:00; Professor ZERN, 117 M. H.

87. Mine Design and Drawing. (3 Hrs.) Primarily for seniors. Required of all candidates for degrees in mining engineering. Projection of mine workings, extraction, design of shaft bottoms and inside stables, and the solution of mine problems such as confront the engineer in practical work.

First semester; M., 9:00, T. Th., 2:00; Professor ZERN, 117 M. H.

88. Shafting and Tunneling. (2 Hrs.) Primarily for seniors. Required of all candidates for degrees in civil engineering. Methods used in shafting and tunneling, and their especial adaptability to the difficulties encountered. Rock drills, drilling and blasting practice. Practice in foreign countries, such as Germany, England, Belgium and France.

First semester; M. F., 10:00; Professor ZERN, 119 M. H.

90. Mine Surveying. (2 Hrs.) Required of all candidates for degrees in mining engineering. This course is given in the second and third weeks following the end of the sophomore year, in continuation of the one week course in Surveying 109. Practice supplementing Mine surveying 80.

Summer term; twelve working days, 8:00-12:00, and 1:00-5:00; Professor ZERN, 119 M. H.

91. The Manufacture and Properties of Coke. (4 Hrs.) Primarily for seniors. May be elected in place of Electrical engineering 54. Various classes of coke ovens, as the beehive, rectangular, flue or bi-product. Methods of manufacture, physical properties, effects of impurities as ash, sulphur, and phosphorus. Design of ovens, etc.

Second semester; M. W. Th. F., 8:00; Professor ZERN, 119 M. H.

92. Oil and Gas Production. (2 Hrs.) Varieties of oil and gas; distribution; location of wells; leases and royalties; drilling and management of wells; condensation of gasoline; oil and gas companies; reports and valuations of prospects or properties; field, market, and future supply, etc.

Second semester; hours to be arranged; Assistant Professor PRICE, 113 M. H.

95. Mining Laboratory. (2 Hrs.) Required of all candidates for the degree of B.S.E.M. Includes tests of steam engines, boilers, air-compressors, mine fans, and mine car wheels; mine rescue apparatus; methane, carbon monoxide, and carbon dioxide in ventilating currents; explosibility of methane and coal dust in mine air; experiments in coal washing and coal preparation. Prerequisite: Mechanical laboratory 131.

First semester; Th., 8:00; Professors ZERN and GRUMBEIN, 11 and 116 M. H.

96. Metallurgical Laboratory. (1 Hr.) Required of all candidates for the degree of B.S.E.M. Methods of coal sampling, crushing, pulverizing and screening, tests on coal to determine their suitability

for coking; volatile matter, by-products and permanent gases in coals; proximate analysis of coals; analyses of mine gases; use of various types of pyrometers; heat determinations, cupellation and amalgamation tests, etc.

Second semester; hours to be arranged; Professor ZERN, 116 M. H.

97. Oil and Gas Laboratory. (2 Hrs.) Calorimeter tests on oil and natural gas; the testing of lubricating oils; determination of viscosity and flashing points; the analyses of gases; tests on the absorption and compression methods of deriving gasoline from natural gas; etc.

First semester; hours to be arranged; Professor ZERN, 116 M.H.

98. Oil and Gas Laboratory. (2 Hrs.) A continuation of Oil and gas laboratory 97. Excursions to oil and gas fields near by; study of design and construction of gasoline plants.

Second semester; hours to be arranged; Professor ZERN, 116 M. H.

99. Thesis. (3 Hrs.) Primarily for seniors. Required of all candidates for degrees in mining engineering. The student is encouraged to choose such subjects as will involve careful observation, collateral reading and the collection of data.

Second semester; hours to be arranged; Professor ZERN. 119 M. H.

RAILWAY AND HIGHWAY ENGINEERING AND SURVEYING.

100. Land Surveying. (3 Hrs.) Required of all candidates for degrees in civil and mining engineering. Theory and practice of land surveying. Lectures, recitations, field practice.

Second semester; M. Th. F., 10:00; practice, W. F., 2:00 or S., 8:00; Professor MORRIS and Mr. OSBORN, 218 M. H.

101. Surveying. (1 Hr.) Primarily for first year students. Required for degrees in mechanical and electrical engineering. Theory and use of the compass, transit and level, the laying out and measuring of areas and leveling. Prerequisite: Plane trigonometry.

Second semester; T., 10:00, Th., 2:00; Professor MORRIS and Mr. OSBORN, 218 M. H.

102. Advanced Surveying. (2 Hrs.) Primarily for second year students. Required of candidates for degrees in civil and mining engineering. Continuation of Surveying 100. Transit and stadia surveys, leveling, plane table, elementary hydrographic surveying and field astronomy.

First semester; recitation, M., 10:00; practice, S., 8:00; Professor MORRIS and Mr. OSBORN, 218 M. H.

103. Topographical Surveying. (2 Hrs.) Primarily for second year students. Required of candidates for degrees in civil engineering. Theory and practice of topography, hydrographic and barometric surveying. Lectures, recitations, field practice and map drawing. Prerequisite: Land surveying 100.

Second semester; lecture, M., 9:00; practice hours to be arranged; Professor MORRIS, 218 M. H.

104. Railway Location. (3 Hrs.) Primarily for third year students. Required of all candidates for degrees in civil engineering. Theory and practice of railroad surveying. Lectures, recitations, field work, and drawing. Searles' Field Engineering. Prerequisite: Land surveying 100.

First semester; T. W. F., 9:00; Professor MORRIS, 218 M. H.

105. Railway Construction and Maintenance. (3 Hrs.) Primarily for third year students. Required of all candidates for degrees in civil engineering. Tunnels, trestles, track-work, earth-work, signaling, grading, masonry, drawing. Prerequisite: Railway location 104.

First semester; M. W. F., 11:00; Professor MORRIS, 218 M. H.

106. Roads and Pavements. (3 Hrs.) Primarily for fourth year students in civil engineering. Required of all candidates for degrees in civil engineering. Location, construction and maintenance; study and comparison of various types of roads; road making materials; lectures, recitations and field work.

First semester; M. W. F., 11:00; Professor MORRIS, 218 M. H.

107. Railroad Economy. (2 Hrs.) Optional for fourth year students in civil engineering. General theory of railroad location; effect of grades, curvature, and distance on operating expenses and revenue; railroad finance and management.

Second semester; T. Th., 11:00; Professor MORRIS, 218 M. H.

108. Highway Economics. (2 Hrs.) Optional for fourth year students in civil engineering. Continuation of Roads and pavements 106, with special reference to permanent improvements and maintenance of existing roads. Re-surveys, re-location, drainage, etc.

Second semester; T. Th., 8:00; Professor MORRIS, 218 M. H.

109. Surveying. (1 Hr.) Required of all candidates for degrees in civil and mining engineering. Surveying practice supplementing Courses Nos. 100, 102, 103 and 80. Prerequisite: Topographical surveying 103 or Mine surveying 80.

Summer term; first six working days, 8:00-12:00, and 1:00-5:00; Professor MORRIS and Mr. OSBORN, 210 M. H.

110. Railroad Surveying. (2 Hrs.) Required of candidates for degrees in civil engineering. Surveying practice supplementing Railway location 104. Prerequisite: Railway location 104.

Summer term; the first twevle working days, 8:00-12:00, and 1:00-5:00; Professor MORRIS, 218 M. H.

113. Thesis. (3 Hrs.) Optional for fourth year students in civil engineering. (See page .....).

Second semester; hours to be arranged; Professor MORRIS, 218 M. H.

STEAM, GAS, AND EXPERIMENTAL ENGINEERING.

120. Steam and Gas Machinery. (3 Hrs.) Required of third year students in civil engineering. Elementary thermodynamics, steam properties, calorimeters, fuels, boilers, engines, pumps, compressors, gas engines, turbines. Arranged for the selective design of parts of a plant. Prerequisite: Physics 7.

First semester; M. T. F., 10:00; Professor EMORY, 221 M. H.

121. Thermodynamics of Engineering. (3 Hrs.) Primarily for third year men. Required of all candidates for the degrees in mechanical, electrical and mining engineering. Mechanical theory of heat, thermodynamics of gases and vapors with special application to steam and other heat engines, compressed air and refrigeration. Prerequisites: Physics 6, and 7, and Integral calculus.

First semester; M. W. F., 9:00; Professor GRUMBEIN, 118 M. H.

122. Heat Engines. (3 Hrs.) Required of candidates for degrees in mechanical, electrical and mining engineering. Continuation of Thermodynamics 121. Expansive working of steam and gas, principles of design, construction and operation of steam engines, air compressors, gas engines, and refrigerating machines.

Second semester; M. W. F., 9:00; Professor GRUMBEIN, 118 M. H.

123. Power Plant Design. (3 Hrs.) Open to fourth year and graduate students. Required of candidates for degrees in mechanical, mining and electrical engineering. The study of steam, gas and hydro-electric plants; selection of prime movers and auxiliary machinery for central and isolated stations; location of the plant; arrangement, sub-division into units and installation; economics, organization and management of power plants. Prerequisite: Thermodynamics 121.

First semester; M. W. F., 8:00; Dean JONES and Professor GRUMBEIN, 125 M. H.

124. Steam Boilers. (2 Hrs.) Elective for seniors. Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys, and accessories; steam piping and distribution. Prerequisites: Machine design 35 and Thermodynamics 121.

Hours to be arranged; Professor GRUMBEIN, 118 M. H.

125. Steam Turbines. (3 Hrs.) Optional for fourth year students in mechanical engineering, and for graduate students. Flow of saturated and superheated steam and the theory and design of the steam turbine. Prerequisite: Heat engines 122.

Second semester; M. W. F., 9:00; Professor CHURCH, 209 M. H.

126. Gas Engines and Gas Engineering. (3 Hrs.) For fourth year and graduate students. Optional for fourth year students in mechanical engineering. The study of fuel gases, gas production and transmission, gas engines, etc. Prerequisite: Heat engines 122.

Second semester; M. W. F., 11:00; Dean JONES, 125 M. H.

127. Heating and Ventilating. (3 Hrs.) Open to fourth year and graduate students. Optional for students in mechanical engineering. Principles, comparative merits and design of various systems of ventilating, and heating by hot air, hot water, steam, electricity. A careful study of the systems in the different University buildings. Prerequisite: Thermodynamics 121, or Steam and gas machinery 120.

Second semester; M. W. F., 8:00; Professor GRUMBEIN, 118 M. H.

128. Development and Utilization of Power. (3 Hrs.) For fourth year and graduate students. Optional for fourth year students in mechanical engineering. Historical development of heat engines and motors, with special reference to economy in power production and manufacturing interests. Prerequisite: Power plant design 123.

Second semester; M. W. F., 9:00; Professor EMORY, 221 M. H.

130. Mechanical Laboratory. (2 Hrs.) Primarily for third year students. Required of all candidates for degrees in engineering. Theory, calibration and use of steam engine indicators, steam gages, thermometers; calorimeter tests of coal and natural gas; testing lubricating oil; analysis of flue gases; efficiency tests of simple engines and pumps. Prerequisite: Physics 7 and Statics 70, and accompanying Steam and gas machinery 120 or Thermodynamics 121.

First semester; first section, S., 8:00; second section, F., 2:00; Professor GRUMBEIN, 11 H. H.

131. **Mechanical Laboratory.** (2 Hrs.) Required of all candidates for degrees in engineering. Continuation of Mechanical laboratory 129. Tests of wrought iron, cast iron, steel, timber, stone, brick, cement, and concrete. Prerequisite: Mechanical laboratory 130 and Mechanics of materials 71.

Second semester; first section, S., 8:00; second section, Th., 2:00; Professor GRUMBEIN, 11 M. H.

132. **Engineering Laboratory.** (2 Hrs.) Primarily for fourth year students. Required of all candidates for degrees in mechanical, electrical and mining engineering. Tests of boilers and engines, air compressors, fans, and blowers, hydraulic motors, steam heating apparatus, etc.; valve setting; flow of steam through orifices and pipes; application of Hirn's analysis. Prerequisite: Mechanical laboratory 131.

First semester; Th., 8:00; Professor GRUMBEIN, 15 M. H.

133. **Engineering Laboratory.** (2 Hrs.) Required of all candidates for degrees in mechanical and electrical engineering. Open to graduate students. Continuation of Laboratory 132. Combined tests of performances of boilers, engines, electrical and other power transmission machinery; testing of power plants; special research work. Prerequisite: Engineering laboratory 132.

Second semester; Th., 8:00; Professor GRUMBEIN, 15 M. H.

134. **Engineering Laboratory.** Open only to graduates. Commercial tests and research work. Prerequisite: Engineering laboratory 133. Credit will be given on the basis of the time spent in the laboratory and the progress of the student.

Hours to be arranged; Dean JONES and Professor GRUMBEIN.

135. **Thesis.** (3 Hrs.) Optional for fourth year students in mechanical engineering. Investigation or original research on some special topic relating to steam, gas or experimental engineering.

Second semester; hours to be arranged; Dean JONES and Professor GRUMBEIN.

136. **Highway Laboratory.** Open to fourth year and graduate students in civil, mechanical and mining engineering. Testing of stone, brick, sand, clay, concrete, and bituminous and other materials entering into road construction, etc. Credit will be given on basis of time spent in the laboratory and the progress of the student.

Hours to be arranged; Dean JONES and Director WILLIAMS, M. H.

STRUCTURAL AND HYDRAULIC ENGINEERING.

141. Roofs and Bridges. (4 Hrs.) Primarily for third year students. Required of all candidates for the degree of B.S.C.E. Stresses in plate-girder bridges, and simple roof and bridge trusses; methods for determining the various loads by both analytical and graphical methods. Complete design of a wooden roof truss, including detailed drawing. Prerequisite: Mechanics of materials 71.

Second semester; M. T. Th., 10:00, and Th., 2:00-5:00; Professor DAVIS, 219 M. H.

142. Bridge Design. (4 Hrs.) Primarily for fourth year students. Required of all candidates for the degree of B.S.C.E. Computations and drawings are made for the complete design of a riveted or pin-connected Pratt truss bridge. The computations determine the sections of all members, as well as the details, splices, riveting, etc. Prerequisite: Roofs and bridges 141.

First semester; T. Th., 9:00-12:00; W. F., 2:00-5:00; Professor DAVIS and Mr. OSBORN, 217 M. H.

143. Advanced Structures. (3 Hrs.) Primarily for fourth year and graduate students. Required of all candidates for the degree of B.S.C.E. Loading and stresses in cantilevers, continuous girders and trusses, swing bridges, and metal arches including the two-hinged and the three-hinged types in the spandrel-braced and arch-ribbed forms. Prerequisite: Roofs and bridges 141.

Second semester; M. W. F., 9:00; Professor DAVIS, 219 M. H.

144. Structural Engineering. (2 Hrs.) Primarily for fourth year students. Required of all candidates for the degree of B.S.M.E. A course of two recitations per week devoted to the study of the loads and stresses in simple beam and truss bridges and in roof trusses. Prerequisite: Mechanics of materials 71.

First semester; T. W., 11:00; Professor DAVIS, 219 M. H.

145. Steel Building Design. (3 Hrs.) For fourth year and graduate students. Elective. Mill and office buildings of steel. Design of trusses, beams, columns, and bracing for all loads; critical study of details, methods of erection, weights and costs. A small mill building is completely designed and shop drawings made for same. Prerequisite: Roofs and bridges 141.

Hours to be arranged; Professor DAVIS, 219 M. H.

146. Foundations and Masonry Construction. (3 Hrs.) Primarily for fourth year and graduate students. Required of all candidates for the degree of B.S.C.E. Sheet piling, coffer dams, cribs, metal cylinder piers, pneumatic caissons, open caissons, and other forms of bridge foundations; building foundations and methods of underpinning the same. Masonry construction. Prerequisites: Mechanics of materials 71, and Mechanical laboratory 130.

First semester; M. W. F., 9:00; Professor DAVIS, 219 M. H.

147. Concrete Construction. (4 Hrs.) Primarily for fourth year and graduate students. Required of all candidates for the degree of B.S.C.E. Constituent elements and properties of plain concrete, both from the experimental and theoretical standpoints. Mechanics underlying the design of concrete beams, columns, and floor systems, experimental investigations and methods of construction. Prerequisites: Foundations and masonry construction 146, and Roofs and bridges 141.

Second semester; T. Th., 9:00, W. F., 2:00-5:00; Professor DAVIS, 219 M. H.

148. Sanitary Engineering. (3 Hrs.) Primarily for fourth year students. Required of all candidates for the degree of B.S.C.E. A study of the design, construction, and maintenance of sewers and appurtenances, and of the modern methods of sewage disposal. Prerequisite: Hydraulics 73.

First semester; T. Th., 8:00; M., 2:00-5:00; Mr. OSBORN, 24 M. H.

149. Water Supply Engineering. (3 Hrs.) Primarily for fourth year students. Required of all candidates for the degree of B.S.C.E. The quantity of water required for cities and towns, hydrology of drainage basins, steam flow and ground supplies; design of reservoirs, standpipes, etc.; the quality of water and the various means of water purification. Prerequisite: Hydraulics 73.

First semester; M. W. F., 8:00; Professor DAVIS and Mr. OSBORN, 219 M. H.

150. Hydraulic Construction and Water Power Engineering. (3 Hrs.) Primarily for fourth year and graduate students. Required of all candidates for the degree of B.S.C.E. in Option 1. Design and construction of high masonry dams, including a problem of the complete design, with working drawings, of a special masonry dam. The engineering features of water power. Prerequisite: Hydraulics 73.

Second semester; T. Th. F., 8:00; Professor DAVIS and Mr. OSBORN. 219 M. H.

151. Hydraulic Measurements. (1 Hr.) Primarily for fourth year and graduate students. Volume of water flowing in open channels by floats and current meters. This work is made particularly effective through the accessibility of the Monongahela river. Measurement of small quantities by orifices, weirs, and other devices. Periodicals searched for experimental data. Prerequisite: Hydraulics 73.

First semester; M., 2:00-5:00; Professor DAVIS and Mr. OSBORN, 219 M. H.

152. Thesis. (3 Hrs.) For fourth year students. Required of all candidates for the degree of B.S.C.E. Special design, investigation or original research on some assigned topic relating to structural, hydraulic or sanitary engineering.

Second semester; hours to be arranged; Professor DAVIS.

153. Sewage and Water Purification Works. (2 Hrs.) Elective for fourth year students. A continuation of courses 148 and 149. A detailed study of the principles and practice of the design and operation of water and sewage purification works. Prerequisites: Sanitary engineering 148 and water supply engineering 149.

Second semester; hours to be arranged; Mr. OSBORN, 24 M. H.

154. Statically Indeterminate Structures. (4 Hrs.) For graduate students. A continuation of Advanced structures 143. Study of various methods of design of statically indeterminate structures such as principle of least work, use of auxiliary load of unity, methods of angle changes, elastic changes, etc. Theory of flat slabs; secondary stresses, etc. Prerequisite: Advanced structures 143.

First or second semester; hours to be arranged; Professor DAVIS, 219 M. H.

155. Advanced Bridge Design. (4 Hrs.) For graduate students. Computation and drawings made for some type of statically indeterminate structure. Prerequisites: Advanced structures 143 and Bridge design 142.

First or second semester; hours to be arranged; Professor DAVIS, 219 M. H.

GENERAL AND MISCELLANEOUS.

160. Building Superintendence. (2 Hrs.) An elective course for fourth year and graduate students in engineering and others having the preparation. Study of construction and inspection of buildings; inspection of gas fitting, electric and heating systems; specifications and contracts. Prerequisite: Kinetics 72.

Either semester; hours to be arranged: Professor EMORY. 221 M. H.

161. Contracts and Specifications. (2 Hrs.) Open to fourth year and graduate students. Required of all candidates for degrees in civil and mechanical engineering. Essentials of a contract; applications of the law of agency, sales, partnership, and private corporations; rights, duties, and liabilities of contractors; standard specifications.

Second semester; M. W. F., 8:00; Professor EMORY. 221 M. H.

162. Engineering Society. (1 Hr.) Primarily for third year students. Required of all candidates for degrees in engineering. Membership, attendance and active participation in the Engineering Society. See special announcements, page .....

Throughout the year; bi-weekly, F., 6:45 p. m.; Professor EMORY, 226 M. H.

163. Engineering Society. (1 Hr.) For fourth year and graduate students. Required of all candidates for degrees in engineering. Continuation of Engineering Society 162.

Throughout the year; bi-weekly, F., 6:45 p. m.; Professor EMORY, 226 M. H.

164. Summer Practice. (2 Hrs.) Required of all candidates for degrees in engineering. At least six weeks of practical experience in some branch of engineering activity, preferably of a character that will articulate with the student's major subjects. Students are recommended to spend all vacation periods in practical work but under exceptional circumstances the Faculty of the College of Engineering may permit the substitution of an approved practical course taken in residence. Application for summer credit should be made before beginning the work and the work done should be certified and reported in accordance with the special rules for Summer Practice, on or before October 1st. after the work has been done. Work may be done during any vacation period.

SUMMER SCHOOL IN MINING.

The Summer School of the Department of Mining offers to men engaged in the mining of coal, whether operators or employees, an opportunity to receive a short course in instruction in subjects pertaining to their life work. During its session of six weeks, instruction is given in the following subjects: properties, characteristics and methods of testing mine gas; analysis of mine air; mine ventilation; mine explosives; prevention of accidents; first aid to the injured; and mine rescue work. In addition to these courses, opportunity is offered the student for work in mechanical drawing and in the machine and woodworking shops. Other elective courses are also offered.

Tuition is free to West Virginia students. It is believed that $50 or $60 should cover all necessary expenses for the six weeks.

The fifth annual session of the Summer School of Mining will begin Monday, June 18, 1917, and continue until Saturday, July 28, 1917.

MINING EXTENSION COURSES.

Extension courses in mining are offered under the direction of the University at various mining centers throughout the state. The work of instruction in these courses is carried on conjointly by a University instructor and a local instructor, who may be the mine engineer or the superintendent or foreman of the coal company. The University instructor visits each center from two to four times a month and supplements the work of the local instructor by means of lectures, demonstrations, lantern slides and motion pictures. Special stress is laid upon the safety of the workmen. Lectures are also given on such topics of general interest as sanitation, domestic science, care and health of children, etc.

For further information concerning the Summer School of Mining or the Extension Courses in Mining, apply to Professor E. N. Zern, head of the Department of Mining Engineering, Morgantown, W. Va.

SCHOOL OF GOOD ROADS.

The School of Good Roads has been organized to meet the demand for instruction in highway construction and maintenance, and to comply with the requirements of Section 17, Chapter 41, of Acts of the Legislature of 1913 as follows: "All county road engineers shall visit the office of the state road bureau at least once in every year, and shall receive instruction in road building for at least ten days, and the bureau may fix the time or times when said annual visit may be made by such county road engineers for the purpose of receiving such instruction." This school is under the joint supervision of the University and the State Road Bureau and is made the official school of instruction for county road officials. It is open to all who are interested in good roads regardless of entrance requirements or previous experience.

The fifth session of the Road School will be held at the University in February, 1918. For further information apply to A. D. Williams, Director of the State Road Bureau, Morgantown, W. Va.

THE COLLEGE OF AGRICULTURE

FACULTY AND STAFF.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

JOHN LEE COULTER, A.M., PH.D., *Dean*

THOMAS CLARK ATKESON, PH.D., *Professor of Animal Husbandry, Emeritus*

WILLIAM HORACE ALDERMAN, B.S. AGR., *Professor of Horticulture*

EARL WOODDELL SHEETS, B.S. AGR., M.S., *Professor of Animal Husbandry*

LEONARD MARION PEAIRS, B.S. AGR., M.S., *Professor of Entomology*

RACHEL HARTSHORN COLWELL, A.M., *Associate Professor of Home Economics*

CHARLES AUGUSTUS LUEDER, D.V.M., *Associate Professor of Veterinary Science*

ARTHUR L. DACY, B.S., *Associate Professor of Horticulture*

FORREST W. STEMPLE, A.B., M.S., *Associate Professor of Agronomy*

EDGAR L. ANDREWS, B.S. AGR., *Assistant Professor of Poultry Husbandry*

EUGENE CURTIS AUCHTER, B.S. AGR., *Assistant Professor of Horticulture*

CHARLES HERMAN WINKLER, PH.D., *Assistant Professor of Agricultural Education*

ANDREW JACKSON DADISMAN, B.S.AGR., M.S., *Assistant Professor of Farm Management*

JOHN JONATHAN YOKE, B.S. AGR., *Assistant Professor of Animal Husbandry*

ROBERT M. SALTER, M.S., *Instructor in Soils*

HENRY DORSEY, M.S. AGR., *Instructor in Agronomy*

HARLEY LUCIUS CRANE, B.S. AGR., *Instructor in Horticulture*

MARY BERTHA OLIVER, B.S., *Instructor in Home Economics*

*AUBREY J. SWIFT, M.S., *Instructor in Animal Husbandry*

WILLIAM ALLEN RHEA, M.S. AGR., *Instructor in Dairy Husbandry*

CALLIE CONGIE NUZUM, B.S.H.E., *Instructor in Home Economics*

CLARENCE FLOYD WELLS, A.B., *Instructor in Soils*

THEODORE CLINTON McILVAINE, M.S., *Instructor in Agronomy*

ROLAND HARRISON PATCH, M.S. AGR., *Instructor in Horticulture*

†HARLIN REX COKELEY, B.S. AGR., *Instructor in Animal Husbandry*

....., *Instructor in Home Economics*

VIRGINIA GUSEMAN, *Student Assistant in Home Economics*

ERNEST BLAINE WELLS, *Student Assistant in Soils*

PAUL MINOR HAWKINS, *Student Assistant in Horticulture*

ALAN KEYSER CARROLL, *Student Assistant in Dairy Husbandry*

BERT HOLMES HITE, M.S., *Chemist (Experiment Station)*

NAHUM JAMES GIDDINGS, M.S., *Plant Pathologist (Experiment Station)*

WILLIAM EARL RUMSEY, B.S. AGR., *State Entomologist (Experiment Station)*

HORACE ATWOOD, M.S. AGR., *Poultryman (Experiment Station)*

‡LEE I. KNIGHT, PH.D., *Plant Physiologist (Experiment Station)*

ALONZO BEECHER BROOKS, B.S. AGR., *Forester (Experiment Station)*

ISAAC SCOTT COOK, JR., B.S. AGR., *Consulting Agronomist*

FIRMAN E. BEAR, M.S., *Consulting Soils Chemist*

LUTHER FRANCIS SUTTON, B.S., B.S. AGR., *Assistant Horticulturist and Superintendent of Reymann Memorial Experiment Farm*

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*Resigned, effective, January 31, 1917.
†Appointed, effective, July 1, 1917.
‡In co-operation with the University of Chicago.

ANTHONY BERG, B.S., *Assistant Plant Pathologist (Experiment Station)*

CHARLES EDWARD WEAKLEY, JR., *Assistant Chemist (Experiment Station)*

FRANK BATSON KUNST, A.B., *Assistant Chemist (Experiment Station)*

JAN HENDRICK BERGHUIS-KRAK, B.S., *Assistant Chemist (Experiment Station)*

GEORGE WILBUR BURKE, B.S., *Assistant Chemist (Experiment Station)*

*CLEVELAND HENDRICK SCHERFFIUS, *Tobacco Investigations (Experiment Station)*

*ROSS HOMAN TUCKWILLER, B.S. AGR., *Assistant in Beef Cattle Investigations (Experiment Station)*

*CHARLES FAYE SARLE, B.S., *Assistant in Farm Management (Experiment Station)*

CALVIN R. TITLOW, *Director of Agricultural Extension*

CHARLES HENRY HARTLEY, B.S., *Assistant to Director of Agricultural Extension*

*NAT T. FRAME, B.A., *State Agent, Supervisor of County Agricultural Agents*

*BENTON BONNER EZELL, B.S., *Assistant State Agent*

*HU S. VANDERVORT, B.S. AGR., *Assistant State Agent*

*WILLIAM HENRY KENDRICK, B.S., *State Agent in Charge of Boys' Clubs*

STUART ALVERTON CODY, *Assistant Poultry Club Agent*

MARION M. HEPWORTH, B.S., *Associate Professor of Home Economics Extension Work*

*SADIE RAY GUSEMAN, B.S., *Assistant in Home Economics Extension Work, in Charge of Girls' Clubs*

*HARRY W. CAVE, M.S., *Instructor in Dairy Husbandry Extension Work*

*In co-operation with the U. S. Department of Agriculture.

EUGENE ANTHONY TUCKWILLER, B.S. AGR., *Instructor in Animal Husbandry Extension Work*

ROBERT B. DUSTMAN, B.S. AGR., *Instructor in Agronomy Extension Work*

WITHROW REYNOLDS LEGGE, M.S., *Instructor in Horticulture Extension Work*

CHARLES ELLSWORTH STOCKDALE, B.S. AGR., *Agricultural Editor*

ELSIE GAY ZINN, B.S.H.E., *Assistant in Home Economics Extension Work*

FACULTY COMMITTEES.

AGRICULTURAL STUDENTS' COURSES AND HOURS: Dean COULTER, Professors ALDERMAN, PEAIRS, and SHEETS.

HOME ECONOMICS STUDENTS' COURSES AND HOURS: Dean COULTER, Associate Professor COLWELL, and Miss OLIVER

FARM OPERATIONS: Assistant Professors AUCHTER and YOKE, and Mr. DORSEY

ORGANIZATION.

All the agricultural and home economics work of the University is organized under the College of Agriculture. For purposes of administration the college is divided into four branches, viz:

I. Investigation and research as carried on at Morgantown and throughout the State by the staff of the West Virginia Agricultural Experiment Station.

II. Resident instruction for students pursuing agricultural studies at Morgantown, in the classrooms and laboratories, as usually organized for college work.

III. Resident instruction in home economics.

IV. Extension work for all citizens of the State who desire instruction in agriculture and home economics while living on the farm. This work is given by the Department of Agricultural Extension.

These primary divisions of the work of the College of Agriculture should be clearly distinguished. Some of its staff are engaged in college instruction, experiment station research and extension teaching; few of them give their entire time to instruction; a few give their entire time to experiment station work and several are engaged entirely in extension work. Those who do no teaching are so indicated in the above list of the faculty and staff.

I. THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an act of Congress known as the Hatch Act, which was passed on the 2nd day of March of that year. Further support was given by an act of Congress known as the Adams Act, approved June 30, 1906. From the appropriations made by Congress under these acts the Station derives an annual income of thirty thousand dollars. Section 2 of the aforesaid act fully states the object and purpose of the Experiment Station as follows:

"That it shall be the object and duty of said experiment station to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analy-

sis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of foods for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

The State Legislature has charged the Station with the duty of enforcing the law for the control of commercial fertilizers, and has made appropriations for horticultural, live stock, tobacco and poultry investigations and printing, aggregating twenty thousand dollars for the current fiscal year.

Bulletins and annual reports setting forth results of experiments and investigations conducted at the station are published for gratuitous distribution, and will be mailed to any citizen of the state applying for them.

The Experiment Station is engaged solely in research and investigation, the results of which, with those of similar institutions, form the basis of the teaching of the College of Agriculture including the work of the Extension Department.

For further information concerning the work of the Experiment Station address John Lee Coulter, Director.

II. INSTRUCTION IN AGRICULTURE.

AIM AND SCOPE.

The training given by the College of Agriculture is designed to fit its students for farm life, or for work as teachers, field workers, or investigators of agricultural subjects. A large part of the course consists of technical work in the various branches of agriculture. The aim in these courses is to make plain the principles underlying agricultural science, and to give as much practice work as facilities will permit, so that the student will receive a training fitting him for efficient work. The curriculum is planned to give the student a general knowledge of all phases of agriculture, but at the same time to afford him opportunity to specialize in the subjects in which he is particularly interested. A thorough training in the general sciences underlying scientific agriculture is given.

In addition to the technical work in agriculture and general

science, courses in English, sociology, history and economics are required in the College of Arts and Sciences, as the college hopes to train its students to be not only progressive farmers or educators but good citizens and leaders in rural life.

Opportunity is also offered those who wish to prepare for the teaching of agriculture in high schools and normal school or for work in rural school supervision to take the regular courses in the Department of Education and in Agricultural Education, thus securing the best possible professional training for such work.

EQUIPMENT.

The College is now provided with well equipped laboratories in all departments. In Martin Hall the agronomy laboratory occupies one-fourth of the first floor, on which are also the offices of that department. In the basement is a large laboratory for work in soil physics and chemistry, with the most modern equipment. A commercial creamery equipped with the best machinery is operated the year round, in which students can secure instruction in creamery methods and also in the bottling and handling of milk, as the College serves milk from its dairy herd to the best trade in the city. A farm dairy laboratory is supplied with hand churns and separators for instruction in farm dairying, and another fourth of the basement consists of a large milk-testing laboratory.

The entomological laboratory is located on the second floor of Agricultural Hall and is supplied with microscopes, rearing cages, charts, models, and collections. Next to it is the research laboratory of the department of soils, the offices of the dean and director and headquarters for the department of farm management. The lower floor of Agricultural Hall is occupied by the laboratories of the departments of chemistry and plant pathology of the Experiment Station, in which a few advanced students may secure valuable training.

The horticultural department now occupies the second floor of a new frame building erected temporarily to furnish space for its growing activities, where it has a separate room for its library, a classroom, a laboratory, a workroom for budding, grafting, packing apples, etc., and four offices for its staff. The basement of this building is occupied with farm machinery used in the instruction given by the department of agronomy and is used as a livestock judging pavillion. The old greenhouses were torn down during the last year to make way for the new agricultural hall, and new modern greenhouses about double the size of the old have been constructed on a much better site. These, with concrete cold-frames and hot-beds, furnish means for instruction in floriculture and vegetable growing under glass.

The students of the College of Agriculture receive instruction in the laboratories of the various scientific departments of the University with students from the other colleges.

NEW BUILDING FOR COLLEGE OF AGRICULTURE.

In 1915 an appropriation of $100,000 was made for the construction of a modern agricultural hall. Plans are rapidly being made looking toward the construction of this building during the summer of 1917. While it is not probable that the new building will be completed early enough for use at the beginning of the college year 1917-18 the plans contemplate rapid construction, and the new hall should be ready for use late in 1917 or early in 1918.

UNIVERSITY FARM.

The old University Farm is located one mile north of the campus. It is a typical West Virginia farm of about 100 acres on which the tillable area has been brought to a high state of fertility and is used for gardens and experimental plats. The dairy barn has been remodeled with cement floors, feed gutters and walls, and iron stanchions so that it is a strictly modern sanitary dairy barn. Attached to it is a small milk house containing scales and cooler. The dairy herd numbers about 30 head and includes representative cows and a bull of each of the Jersey, Holstein, Guernsey, Ayreshire, and Shorthorn breeds. Southdown, Shropshire, Rambouillet, and Delaine-Merino sheep are to be found in the sheep barn and Berkshire, Poland China, Chester White, and Duroc-Jersey hogs in portable houses. A modern open shed for steer feeding adjoins the dairy barn, in which forty head of young cattle can be used for feeding experiments. Another barn houses herds of purebred Hereford, Angus and Shorthorn cattle. A new horse barn furnishes stall room for farm teams, with box stalls. The Poultry Department is equipped with three large open-front houses, each of which will accommodate 800 fowls, an incubator house, six colony houses, a Petaluma brooder house, and numerous portable colony houses. The poultry work is conducted on a commercial scale and furnishes opportunity for training in methods of poultry management.

ENLARGEMENT OF THE FARM.

Through an arrangement entered into between the state and Monongalia County, the county agreed to provide $75,000 to be used for extending the material equipment of the University. In view of

the specific needs of the College of Agriculture for more farm land with necessary buildings and equipment, arrangements have been made whereby about six hundred acres of additional land to be thoroughly equipped with buildings, implements and machinery, and livestock, have been secured. This was available for use during 1916. During the coming years, therefore, the necessary equipment for efficient work in agronomy (including soils), animal husbandry, dairy husbandry, poultry husbandry, horticulture (including small fruits, vegetables and flowers), and the other departments will be provided.

REYMANN MEMORIAL FARM.

Through the gift of Anton Reymann and Paul O. Reymann of Wheeling, West Virginia, executors of the estate of Lawrence A. Reymann deceased, the University came into possession on Marsh 1st, 1917, of the Reymann Memorial Experiment Farm, including 930 acres of land on the Capon River in Hardy County, and a herd of more than 100 head of pure-bred Ayrshire cattle. The farm is given for the use of the College of Agriculture for experimental work in the breeding and maintenance of Ayrshire dairy cattle.

ENTRANCE REQUIREMENTS.

For admission to the College of Agriculture, the candidate must have credit for fifteen units, obtained by examination or on certificate from a duly accredited secondary school.

Of the fifteen units which must be offered for admission to the course leading to the degree of Bachelor of Science in Agriculture, nine are definitely prescribed as follows:

	Units
English	3
French, German, or Latin (German is recommended)	2
History	1
Mathematics: Algebra 1; Plane Geometry 1	2
Science	1
The unit offered may be either physics, chemistry, botany, zoology, or botany and zoology.	
Total prescribed	9

The remaining six units must be chosen as elective from the list given on page 68 in the announcements of the College of Arts and Sciences. Prospective students are urged to take free hand and mechanical drawing and wood-shop work if they can be secured in the secondary school. A detailed statement of the work required for each unit of prescribed and elective work is given on page 58.

FARM OPERATIONS.

The faculty strongly recommend that students who have not had practical farm experience spend at least one year on a first class general farm before pursuing the course. It is impossible for students who have not had farm experience to secure the fullest benefit of the course.

On entering the college, each student will be examined as to his ability to perform the various operations necessary to carry on farm work and as to his knowledge of farming. A failure to pass this examination will not exclude him from college; another opportunity will be provided at the beginning of the second year to pass off the requirement. If the student then fails he will be required to remain at the college during the summer vacation between his second and third year, or to work for the same period on some farm approved by the committee in charge. Weekly reports of the farm operations will be required and he will receive his final examination of the subject at the beginning of the junior year. In case of continued failure, the student's degree will be withheld until he shall satisfy the requirements herein described. This work will be reported on as a preparatory study, and will have no credit value as a part of the required work of the course.

The examinations will test the student's knowledge of everyday farm operations such as those indicated in the following list:

(1) Harnessing a team; (2) Naming parts of harness; (3) Hitching team to farm implements; (4) Plowing; (5) Driving a team; (6) Feeding animals; (7) Distinguishing common breeds of farm animals; (8) Handling farm animals; (9) Milking cows; (10) Distinguishing common breeds of poultry; (11) Knowledge of a yield for a few farm crops; (12) knowledge of common practices in planting the ordinary farm crops; (13) Identifying a few common varieties of apples; (14) Familiarity with common vegetables of the farm garden, and (15) Familiarity with common farm machinery.

DEGREES.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE.

Credits Required.

The degree of Bachelor of Science in Agriculture will be conferred upon any student who satisfies the above entrance requirements, and offers one hundred and forty-four hours credit for college courses including a satisfactory thesis or equivalent.

The "semester hour" is the standard for computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (eighteen weeks) and in one recitation hour with two preparation hours a week, or in three hours practice or laboratory work requiring no outside preparation. No student is permitted to register for less than fifteen hours or more than twenty hours of work in any one semester.

Classification of Students.

To be classified as a conditioned freshman in the College of Agriculture a student must have credit for at least thirteen units of entrance requirements; to be classified as a regular freshman he must have fulfilled all entrance requirements. To be classified as a sophomore he must have credit for 26 hours of college work; as a junior, 64 hours; and as a senior, 100 hours.

Summer Courses.

It will be noted that many of the courses described in the following pages are also given in the Summer School. In many cases these courses may be pursued to better advantage during the summer. Students who are admitted with advanced standing or students who for any reason may be compelled to do so, may complete the prescribed course for the degree of Bachelor of Science in Agriculture by taking full work for three summer sessions (9 hours each) and three academic years, but only students of exceptional ability or mature age should undertake such a curriculum, which should be arranged with the dean in advance.

Admission with Advanced Standing.

Students from other institutions will be given credit for work already done in accordance with the general rules for advanced standing (See page 32.), but at least one year of resident work will be required for the baccalaureate degree in agriculture.

Required and Elective Subjects.

Of the one hundred and forty-four hours required for the degree, ninety-four are prescribed for all students, as indicated in the curriculum below. Students who are not required to take military science must substitute elective credits. The remaining fifty hours' credit must be elected from such courses as may be prescribed by the class officer. Of these not less than fifteen nor more than twenty-five hours must be elected from the College of Arts and Sciences. The remainder must be elected from the College of Agriculture, including those courses prescribed for certain majors. (See pages 205 to 209).

Class Officer.

The dean of the College of Agriculture will act as class officer (See page 34.) for all freshmen and sophomore students in the College of Agriculture. The head of the department in which a student elects to take his major will be his class officer for the junior and senior years.

Graduate Work.

Graduates of the College of Agriculture, or from institutions with equivalent work, may be admitted to the University as candidates for the degree of Master of Science, M.S. (Agr.), under the conditions prescribed on page 40.

Special Students.

Persons who do not desire to become candidates for a degree may, by permission of the committee on entrance, and of the faculty of the College of Agriculture, be admitted as special students, subject to the provisions set forth on page 32.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE.

Freshman Year—First Semester.

		Hrs.	
Inorganic chemistry (Chem. 1)	8:00 M. W. F., 2:00 M. or Th.	4	
Agricultural botany (Botany 3)	8:00 T. Th., 2:00 W. F.	4	
Animal Husbandry(An. Husb. 40)	9:00 T. Th., 2:00 W. or F.	4	
Rhetoric and comp. (English 1)	11:00 M. W. F.	3	
English literature (English 26)	11:00 T. Th.	2	
Military science (1)	12:00 M. T. Th. F.	1	18

Freshman Year—Second Semester.

Inorganic chemistry (Chem 2)	9:00 M. W. F., 2:00 M. or Th.	4	
Agricultural botany (Botany 4)	8:00 T. Th., 2:00 W. F.	4	
Vegetable gardening (Hort. 3)	10:00 T. Th., 2:00 T.	3	
Rhetoric and comp. (English 2)	8:00 M. W. F.	3	
English literature (English 27)	11:00 T. Th.	2	
Introduction to agriculture	10:00 F.	1	
Military science (2)	12:00 M. T. Th. F.	1	18

Sophomore Year—First Semester.

Animal biology (Zoology 1)	8:00 T. Th., 2:00 M. W.	4	
Introductory physics (Physics 1)	8:00 M. W. F.	3	
Physics laboratory (Physics 2)	10:00 Th.	1	
Elementary pomology (Hort. 2)	10:00 M. F., 2:00 T. or F.	3	
Soil fertility (Agronomy 21)	11:00 M. F., 2:00 M. W.	4	
Military science (3)	12:00 M. T. Th. F.	1	
Elective		2 or 3	19

Sophomore Year—Second Semester.

Introductory physics (Physics 3)	8:00 M. W. F.	3	
Physics laboratory (Physics 4)	10:00 Th.	1	
Farm crops (Agronomy 2)	9:00 M. W. F., 2:00 M.	4	
Farm dairying (Dairy Husb. 21)	9:00 T. Th., 2:00 W.	3	
General entomology (Ento. 1)	11:00 M. W. F., 2:00 Th.	4	
Farm poultry (Poultry Husb. 1)	10:00 M. F., 9:00 S.	3	
Military science (4)	12:00 M. T. Th. F.	1	19

Required Work, Junior and Senior Years—First Semester.

Principles of economics (Econ. 1)	8:00 M. W. F.	3	
Organic chemistry (Chem. 16)	9:00 T. Th., 2:00 T. or Th.	3	
Elementary sociology (Soc. 1)	10:00 M. W. F.	3	
General bacteriology (Botany 10)	11:00 T. Th., 2:00 T.	3	12

Second Semester.

Rural economics (Farm Mgt. 2)	8:00 M. W. F.	3	
Farm management (1)	9:00 M. W. F.	3	
Am. econ. history (History 29)	11:00 M. W. F.	3	9

*Required courses (see page 204).

MAJOR SUBJECTS.

Upon registering at the beginning of the junior year each student will indicate to the dean the department in which he wishes to do major work, and will be referred to the head of that department as his class officer (See page 34). The curricula given below are suggestive except as regards required subjects, and may be varied by the class officer to meet the needs of individual students, but indicate the subjects which are usually advised for students desiring to take major work in the respective departments.

Agricultural Education.

Students taking courses given by the Department of Education, to the amount of twenty hours, including those listed below, will be eligible for state teachers' certificates. All students who do major work in agricultural education will be required to take the course marked.†

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Sociology 1	3		*History 29	3	
*Botany 10	3		*Farm management 1	3	
Education 1 or 4	3		Education 2 or 5	3	
*Chemistry 16	3		†Agricultural education 1	2	
Elective	6	18	Elective	7	18

Senior Year—First Semester.			Senior Year—Second Semester.		
*Economics 1	3		*Farm management 2	3	
Education 4, 6, 13 or 14	3		†Agricultural education 16	3	
Elective	12	18	Education 5, 7 or 15	3	
			Elective	9	18

Agronomy.

Junior Year—First Semester.			Junior Year—Second Semester.		
*Economics 1	3		*Farm management 1	3	
*Botany 10	3		*History 29	3	
Agronomy (elective)	3		Agronomy (elective)	5	
*Chemistry 16	3		Botany 13 or elective	3	
Botany 12 or Geology 2	3		Elective	4	18
Elective	3	18			

Senior Year—First Semester.			Senior Year—Second Semester.		
*Sociology 1	3		*Farm management 2	3	
Agronomy (elective)	3		Agronomy (elective)	3	
Elective	12	18	Elective	12	18

*Required courses (see page 204).

Animal Husbandry.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Economics 1	3		Zoology 2	4	
Chemistry 16	3		*Farm management 1	3	
Animal husbandry 42	2		Animal husbandry 62 or 63	3	
Animal husbandry 43	2		Animal husbandry 45	3	
Animal husbandry 44	3		Elective	5	18
Elective	5	18			

Senior Year—First Semester.			Senior Year—Second Semester.		
Zoology 6	3		*Farm management 2	3	
Animal husbandry 61 or 64	3		Veterinary science 3	3	
*Sociology 1	3		Animal husbandry 60	3	
Animal husbandry 47	2		Animal husbandry 46	3	
*Botany 10	3		*History 29	3	
Animal husbandry 50	1		Animal husbandry 50	1	
Elective	3	18	Elective	2	18

Entomology.

Junior Year—First Semester.			Junior Year—Second Semester.		
*Economics 1	3		*Farm management 1	3	
*Botany 10	3		*History 29	3	
Entomology 3	3		Entomology 2	3	
Botany 12	3		Zoology 2	4	
Horticulture 4	3		Botany 13	3	
*Chemistry 16	3	18	Elective	3	19

Senior Year—First Semester.			Senior Year—Second Semester.		
*Sociology 1	3		*Farm management 2	3	
Entomology 4	3		Entomology 4 or 5	3	
Zoology 9	3		Entomology 6	1	
German 1	5		Zoology 10	3	
Elective	4	18	German 2	5	
			Elective	3	18

Farm Management.

Junior Year—First Semester.			Junior Year—Second Semester.		
*Economics 1	3		*Farm management 1	3	
*Botany 10	3		*History 29	3	
*Chemistry 16	3		Economice 2	3	
Economics 5	3		Farm management 4	3	
Elective	6	18	Elective	6	18

*Required courses (see page 204).

Senior Year—First Semester.	Hrs.		Senior Year—Second Semester.	Hrs.	
*Sociology 1	4		*Farm management 2	3	
Economics 14	2		Farm management 3	2	
Economics 7	3		Farm management 7	2	
Elective	9	18	Farm management 6	2	
			Elective	9	18

Horticulture—Pomology.

Junior Year—First Semester.			Junior Year—Second Semester.		
*Economics 1	3		*Farm management 1	3	
Sociology 1	3		*History 29	3	
*Chemistry 16	3		Entomology 9	2	
Horticulture 4	3		Botany 13	3	
Botany 12	3		Elective	7	18
Horticulture 16	1				
Elective	2	18			

Senior Year—First Semester.			Senior Year—Second Semester.		
Horticulture 7	4		*Farm management 2	3	
Horticulture 13	3		*Botany 10	3	
Horticulture 18	1		Horticulture 5	3	
Horticulture 10 or 12	1		Horticulture 11	1	
Botany 14	5		Horticulture 10	1	
Horticulture 11	1		Horticulture 14	3	
Elective	3	18	Horticulture 19	1	
			Elective	3	18

Horticulture—Vegetable Gardening.

Junior Year—First Semester.			Junior Year—Second Semester.		
*Economics 1	3		*Farm management 1	3	
Sociology 1	3		*History 29	3	
*Chemistry 16	3		Entomology 9	2	
Horticulture 15	3		Horticulture 5	3	
Botany 12	3		Botany 13	3	
Elective	3	18	Elective	4	18

Senior Year—First Semester.			Senior Year—Second Semester.		
Horticulture 6	2		*Farm management 2	3	
Horticulture 13	3		*Botany 10	3	
Horticulture 10 or 12	1		Horticulture 14	3	
Botany 14	5		Horticulture 11	1	
Horticulture 11	1		Horticulture 10	1	
Elective	6	18	Horticulture 8	4	
			Horticulture 19	1	
			Elective	2	18

*Required courses (see page 204).

Poultry Husbandry.

Junior Year—First Semester.	Hrs.		Junior Year—Second Semester.	Hrs.	
*Economics 1	3		*Farm management 1	3	
*Botany 10	3		*History 29	3	
*Chemistry 16	3		Poultry husbandry 6	2	
Poultry husbandry 5	3		Veterinary science 1	3	
Elective	6	18	Elective	7	18

Senior Year—First Semester.			Senior Year—Second Semester.		
*Sociology 1	3		*Farm management 2	3	
Poultry husbandry 7	3		Poultry husbandry 8	2	
Zoology 10	3		Farm management 7	2	
Animal husbandry 45	3		Animal husbandry 46	3	
Elective	6	18	Elective	8	18

THESIS.

Every candidate for the degree of Bachelor of Science in Agriculture will be required to prepare a thesis on a subject in some special branch of agriculture or in some other department of science applied to agriculture, unless excused by his class officer. The thesis must be based upon the student's personal work. The subject of the thesis must be presented in writing and approved by the class officer not later than November first of the academic year in which the student is a candidate for a degree. The completed thesis must be presented to the class officer for his approval not later than thirty days prior to Commencement day. The thesis must be typewritten and bound according to official specifications for theses, must be signed by the instructor in charge and the class officer and deposited in the University Library before graduation.

*Required courses (see page 204).

REQUIREMENTS FOR CANDIDATES FOR B.S. AGR. DEGREE WHO ALREADY HOLD THE DEGREE OF A.B. OR B.S.

Students who have received the degree of Bachelor of Arts or Bachelor of Science from West Virginia University or any instruction of similar standing, may receive the degree of Bachelor of Science in Agriculture upon the following conditions:

(1) The completion of Physics 1, 2, 3, 4, Chemistry 1, 2, Botany 1, 2, or 3, 4, and Zoology 1, 2, or Entomology 1, 2, or equivalent courses.

(2) The completion of the 32 hours of courses in the College of Agriculture required in the Curriculum on page ....

(3) The completion of at least twenty-four hours of elective courses in the College of Agriculture.

Attention is called to the fact that fifteen hours from the following courses may be credited toward the A.B. degree in the College of Arts and Sciences (See page 71), Agricultural education 1 (History of agricultural education) 2 hrs; Agronomy 2 (Farm crops), 4 hrs.; Soils 1 (Soil fertility), 4 hrs.; Animal husbandry 40 (Introductory animal husbandry), 4 hrs.; Dairy husbandry 21 (Farm dairying), 3 hrs.; Animal husbandry 42 (Feeding farm animals), 2 hrs.; Animal husbandry 43 (Breeding farm animals), 2 hrs.; Animal husbandry 45 (Animal nutrition), 3 hrs.; Animal husbandry 46 (Genetics), 3 hrs.; Entomology 2 (Economic entomology), 3 hrs.; Farm management 1, 3 hrs.; Horticulture 2 (Elementary pomology), 3 hrs.; Horticulture 3 (Elementary vegetable gardening), 3 hrs.; Horticulture 13 (Plant breeding), 3 hrs.; Poultry husbandry 1 (Farm poultry), 3 hrs.

The following courses given in the College of Agriculture are regular electives in the College of Arts and Sciences; Entomology 1. (General entomology), 4 hrs.; Farm management 2 (Rural economics), 3 hrs. Education 16 (High school agriculture), 3 hrs., and Agricultural journalism, 2 hrs. are elective in both colleges.

Students who desire the advantage of the broader training secured by first taking a degree in the College of Arts and Sciences, and who then expect to take the degree of Bachelor of Science in Agriculture, may so arrange their curriculum as to enable them to take sufficient of the elective courses above mentioned to secure the degree in agriculture in one year or in one year and a summr school session after receiving the first degree.

COURSES OF INSTRUCTION.

In the following announcements the number of hours in parenthesis after the name of the course indicates the number of credit hours. Whenever possible, the semester during which the course is given, the hour, the name of the instructor, and the class room, are stated at the end of the announcement of each course. For convenience it is customary to designate the courses of study by the name of the department and the number of the particular course. Thus the course in farm crops is known as "Agronomy 2;" the course in rural economics is known as "Farm management 2;" etc. The abbreviations used are: W., Woodburn Hall; S., Science Hall; M., Martin Hall; M. H., Mechanical Hall; H., Horticultural Building; A., Agricultural Building; F., Fife Building; L. Library.

Only the technical courses offered primarily for the students in agriculture are described here. For detailed description of the other courses listed on page 205 as required or elective in the agricultural curriculum, see the announcement of courses in the College of Arts and Sciences.

Courses marked by an asterisk (*) may be offered for credit in the College of Arts and Sciences. Courses marked by a double asterisk are regular electives in the college of Arts and Sciences.

AGRICULTURE.

Dean COULTER.

1. **Introduction to Agriculture.** (1 Hr.) Required of all freshmen. Lectures by the dean, the university librarian, and members of the faculty, designed to indicate to new students the field of agricultural education, helpful methods of study, the use of the library, etc.

Second semester; **F., 10:00.**

AGRICULTURAL EDUCATION.

Assistant Professor WINKLER.

*1. **History of Agricultural Education.** (2 hrs.) The purpose of this course is to give a better understanding and appreciation of present day tendencies in agricultural education. The origin and development of the movement for agricultural education in Europe and the United States will be considered. The effect of this movement upon education as a whole will be noted.

Second semester; T. Th., 10:00.

**16. High School Agriculture. (3 Hrs.) Required instead of Education 10 of seniors who desire a State Teacher's Certificate. A course designed for persons who expect to teach agriculture in the high school. The organization of courses in secondary agriculture with reference to classroom study and laboratory and field studies; preparation and discussion of lesson plans; methods of teaching; observation and practice teaching.

Second semester; T. Th.; 9:00, T., 2:00; or hours to be arranged.

AGRICULTURAL JOURNALISM.

**12. Agricultural Journalism. (2 Hrs.) Elective. Instruction and practice in writing articles for farm periodicals, in editing, proofreading, illustrating, and in general preparation for publication; bulletin writing; farm advertising; other forms of special farm writing. Prerequisite: English 1 and 2 or consent of instructors.

Second semester; M. Th., 4:00; Associate Professor D. D. JOHNSON and Mr. STOCKDALE.

AGRONOMY.

Associate Professor STEMPLE. Mr. DORSEY, Mr. MCILVAINE, Mr. SALTER, and Mr. WELLS.

Crops.

*2. Farm Crops. (4 Hrs.) Required of sophomores. Lectures and recitations on cereals, forage crops and miscellaneous crops; history, production, seeding, cultivating and marketing; time and methods of planting and preparation of soil. Laboratory fee, $1.00.

Second semester; M. W. F., 9:00; M. T. or F., 2:00; Associate Professor STEMPLE and Mr. MCILVAINE, 4 M. Also given in the Summer School.

10. Forage Crops. (3 Hrs.) Elective. This course is a continuation of the work given on forage crops in course 2. A thorough study is made of all the important grasses and clovers that can be grown for meadow and pasture purposes. Lectures and recitations. Prerequisite: Agronomy 2.

First semester; T. Th., 8:00; W., 2:00; Mr. DORSEY, 4 M.

13. Corn. (2 Hrs.) Advanced study in corn production, seeding, cultivation, uses, marketing and reviews of recent experiment station work on this crop. Laboratory and field studies of market grades, varieties, ear-to-row testing, and other methods of improvement. Prerequisite: Agronomy 2.

First semester; M., 11:00, Th., 2:00; Associate Professor STEMPLE.

14. Small Grains. (2 Hrs.) Advanced study of culture, selecting, testing, storing and marketing of grains. Review and criticism of recent experiment station literature. Laboratory study of market grades and laboratory and field study of varieties. Prerequisite: Agronomy 2.

Second semester; M., 10:00, Th., 2:00; Mr. DORSEY.

15. Field Crop Improvement. (3 Hrs.) Study of principles involved and method used in the improvement of field crops with laboratory and field practice in hybridization, selection, planting, centgeners, and other work dealing with station crop improvement. Prerequisite: Agronomy 2, 10, 13, 14.

First semester; T. Th., 11:00, T., 2:00; Associate Professor STEMPLE.

8. Field Experimentation. (3 Hrs.) Experiment Station methods of investigation, laying out plots of desirable area, shape, and location; maintenance of fertility and uniformity in plots; planting and harvesting plots; keeping records, and interpretation of results. A study of literature on subject and station practice. Prerequisite: Agronomy 15 and 22.

Second semester; T. Th., 11:00, W., 2:00: Associate Professor STEMPLE. Mr. DORSEY, and Mr. SALTER.

12. Research in Farm Crops. A course for advanced undergraduate and graduate students giving an opportunity for research into the problems of farm crops. Prerequisite: permission of class officer.

Second semester and summer; hours and credit to be arranged; Associate Professor STEMPLE and Mr. DORSEY.

9. Thesis. (1 or 2 Hrs.) Students who intend to do thesis work in agronomy must arrange their problems before the close of their junior year so that field work can be arranged.

First and second semester and summer; hours to be arranged.

11. Plant Industry Seminar. (1 Hr.) Required of seniors and graduate students in agronomy and open to juniors; a joint seminar of the department of agronomy and horticulture. Papers will be prepared and read by members of the class upon subjects pertaining to their research or thesis work, or upon special problems. Members of the faculty will present special topics from time to time.

Second semester; hours to be arranged.

Soils.

***21. Soil Fertility.** (4 Hrs.) Required of sophomores. Lectures on the physical, chemical and biological properties of soils with reference to their crop producing power. Prerequisite: Chemistry 2. Laboratory fee, $5.00; refund of $2.50 less breakage.

First semester; M. F., 11:00, M. W., 2:00, or T. Th., 2:00; Mr. SALTER and Mr. WELLS.

23. Soil Chemistry. (3 Hrs.) Elective. Lectures and laboratory work on soil chemistry. The laboratory work will include a complete inorganic analysis of a soil for all the elements contained in it. Colorimetric determinations will be made of the compounds in the siol solution. Prerequisite: Soils 1 and 2. Laboratory fee, $5.00; refund of $2.50 less breakage.

Second semester; hours to be arranged; Mr. SALTER and Mr. WELLS.

24. Soil Bacteriology. (3 Hrs.) Elective. Lecture and laboratory work on bacteria in soils. Laboratory work will include the isolating and working with nitrite, nitrate and ammonifying organisms; isolation of azotobacter and legume bacteria; measuring bacterial activities by chemical means. Prerequisite: Soils 1, 2 and 3. Laboratory fee, $5.00; refund of $2.50 less breakage.

Second semester; hours to be arranged; Mr. SALTER.

25. Soil Physics. (3 Hrs.) Elective. Lectures and laboratory work on the relation between the physical properties of soils and their productivity. This will include determinations of moisture, specific heat, specific gravity, porosity and water holding capacity of soils. A mechanical analysis of a soil will be made by means of the centrifuge. Prerequisite: Soils 1. Laboratory fee, $5.00; refund of $2.50 less breakage.

First semester; hours to be arranged; Mr. SALTER.

26. Advanced Soil Fertility. (2 Hrs.) Elective. Lectures. A review of investigational work which has been and is now being conducted on some of the more important soil problems. Prerequisite: Soils 1.

Second semester; T. Th., 9:00; Mr. SALTER.

27. Soil Literature. (1 Hr.) Open to seniors and graduate students. Library work in reviewing all the important investigational work which has been done on some soil problems in which the student may be interested. Designed to familiarize the student with sources of information and current soil literature.

First or second semester; hours to be arranged; Mr. SALTER.

28. Plant Analysis. (3 Hrs.) Elective. Lectures and laboratory work on the methods of analysis of plants and plant products, of interest to anyone whose major is soils, animal industry, agronomy or horticulture. Prerequisite: Soils 2. Laboratory fee, $5.00; refund of $2.50 less breakage.

First semester; hours to be arranged; Mr. SALTER and Mr. WELLS.

29. Research in Soils. Open to seniors and graduates. Credit given in proportion to work done, (not to exceed three hours.) Elective. Opportunity will be given any student who is qualified to make a study of some soil problem in which he may be interested. This may be either a greenhouse, field or laboratory study.

Summer or either semester; Mr. SALTER.

Rural Engineering.

4. Farm Machinery. (3 Hrs.) A detailed study of the construction, assembling and testing, and care of farm machinery.

Second semester; T. Th., 11:00, M., 2:00; Mr.....

5. Farm Engineering. (3 Hrs.) Lectures and recitations on the detailed study of farm power, water power, and drainage systems.

Second semester; M. F., 11:00, T., 2:00; Mr.....

6. Farm Structures. (2 Hrs.) Lectures covering properties of materials used, planning, construction, and relative cost of farm buildings and other farm structures.

Second semester; W., 11:00, Th., 2:00; Mr.....

ANIMAL HUSBANDRY.

Professor SHEETS, Assistant Professor YOKE, and Mr. COKELEY.

*40. **Introductory Animal Husbandry.** (4 Hrs.) Required of freshmen. For students desiring foundation training in animal husbandry, whether as preparation for advanced courses of study or for a general knowledge of livestock farming. Fundamentals of livestock judging; history of the leading breeds; market classes and grades; principles of feeding and breeding; and the general care and management of farm animals. Assigned readings, lectures and quizzes.

First semester; M. W. F., 9:00 or 11:00, W. or F., 2:00; Professor SHEETS and Assistant Professor YOKE, 7 M.
Also given in Summer School.

*42. **Feeding Farm Animals.** (2 Hrs.) Elective. Classification, digestibility and functions of food nutrients; market grades and food values of feeding stuffs; feeding standards and calculations of balanced rations; adaptability of different feeds; identifying feeds and mixing rations and feeding farm animals. Assigned readings, lectures, and quizzes. Prerequisite: Animal husbandry 40.

First semester; T. Th., 8:00; Mr. COKELEY, 7 M.
Also given in Summer School.

*43. **Breeding Farm Animals.** (2 Hrs.) Elective. Evolution of domestic animals; history of their systematic breeding and improvement; unit characters; the range of variability; the effects of grading and crossing; and systems of breeding. Lectures, assigned readings, and quizzes. Prerequisite: Animal husbandry 40.

First semester; T. Th., 10:00; Assistant Professor YOKE, 4 M.
Also given in Summer School.

44. **Live Stock Judging.** (3 Hrs.) Elective. Judging breeding and fat classes of livestock with reference to market and showyard requirements. Students taking this course will be required to participate in a tour of inspection of representative herds, flocks and studs. Prerequisite: Animal husbandry 40.

First semester; M., 10:00, T. Th., 2:00; Professor SHEETS and Mr. COKELEY, 7 M.

*45. **Animal Nutrition.** (3 Hrs.) Elective. Composition and fuel value of feeding stuffs; digestion, absorption and metabolism of food nutrients; elimination of metabolic products; coefficients of digestibility and nutritive value of feeding stuffs. Prerequisite: Animal husbandry 42, and Chemistry 16.

Second semester; M. W. F., 9:00; Professor SHEETS. 7 M.

*46. Genetics. (3 Hrs.) Heredity; variation; Mendel's and Galton's laws; dominance and segregation; gametic coupling; correlation; mutation theory; inheritance of acquired character; parental influences; pure lines; selection, variability, modification of unit factors. Practical application to breeding. Lectures; references; laboratory. Prerequisite: two years' university work with eight hours in biology. Laboratory fee, $1.00.

Second semester; M. F., 10:00, W., 2:00; Assistant Professor YOKE, 4 M.

47. Herd and Flock Book Study. (2 Hrs.) Elective. A critical study of the most noted flocks and herds at home and abroad with a view to becoming acquainted with the pedigree of the leading blood lines and families of the different breeds of livestock. Prerequisite: Animal husbandry 44.

First and second semesters and Summer School; hours to be arranged; Mr. COKELEY, 1 M.

49. Research. (2 to 5 Hrs.) Elective. Intended primarily for advanced undergraduates and for graduate students who desire to do research along one or more of the following lines: (a) Nutrition. (b) Breeding. (c) Systems of livestock farming. (d) Advanced history of breeds of livestock. (e) Judging. (f) Milk production. (g) Dairy manufactures. Prerequisite: Permission from head of department.

First and second semesters and Summer School; hours to be arranged; Professor SHEETS and staff, 8 M.

50. Animal Industry Seminar. (1 Hr.) Required of juniors, seniors, and graduate students whose major is animal husbandry. Papers will be prepared and read by the members.

First and second semesters; M., 4:30; Professor SHEETS and staff, 7 M.

51. Thesis. (Credit in proportion to work done.) First and second semesters and Summer School.

Hours to be arranged; Professor SHEETS and staff, 8 M.

52. Summer Practice. (1 Hr.) One hour credit will be given for satisfactory reports, made in prescribed form, upon summer work done upon an approved livestock or dairy farm, or creamery. (Request to do summer work must be made upon forms provided, not later than July 1st.)

Professor SHEETS, 8 M.

60. Beef Production. (3 Hrs.) Elective. History of beef breeds; beef type from the standpoint of the butcher, the feeder, and the breeder; market classes and grades; equipment, breeding and management; combined beef and milk production; wintering and grazing; finishing for market. Lectures, assigned readings, quizzes, and judging. Prerequisite: Animal husbandry 40.

Second semester; M. W. F., 8:00; Professor Sheets, 7 M.

61. Horse and Mule Production. (3 Hrs.) Elective. History of breeds, with a critical study of their type, characteristics and adaptability; equipment and methods of breeding and management; care of mares; stallions, jacks, and foals under farm conditions. Lectures, assigned readings, quizzes, and judging. Prerequisite: Animal husbandry 40.

First semester; M. W. F., 9:00; Assistant Professor Yoke, 4 M.

62. Mutton and Wool Production. (3 Hrs.) Elective. Breeds used for mutton and for wool production; type, characteristics, and adaptability; market classes and grades of sheep and wool; sheep breeding as applied to pure bred and grade flocks; feeding, housing and shepherding; factors affecting the quantity, quality, strength and condition of wool and health of the animals. Lectures, assigned readings, quizzes and judging. Prerequisite: Animal husbandry 40.

Second semester; M. W. F., 10:00; Assistant Professor Yoke, 7 M.

63. Pork Production. (3 Hrs.) Elective. History of breeds; breeds with respect to type, characteristics, and adaptability; market classes; swine raising from the standpoint of economic production; breeding, housing, care and feeding of swine. Lectures, assigned readings, quizzes and judging. Prerequisite: Animal husbandry 40.

Second semester; M. W. F., 11:00; Mr....., 4 M.

64. Meat. (3 Hrs.) Elective. Farm butchering, curing and care of meats; yield, quality, and value of meat and by-products as related to breeding, feeding, and health of animals; classes, grades and cuts of meat recognized in wholesale and retail markets. Prerequisite: Animal husbandry 40.

First semester; T. Th., 10:00, S., 8:30; Mr....., 4 M.

DAIRY HUSBANDRY.

Mr. RHEA and Mr.....

*21. **Farm Dairying.** (3 Hrs.) Required of sophomores. A general study of the secretion and composition of milk; care and handling of milk and cream; principles and application of the Babcock test and the lactometer; methods of creaming; construction and operations of separators; methods of making and marketing butter, with special reference to farm conditions. Assigned readings, lectures, and quizzes. Laboratory fee, $1.00.

Second semester; T. Th., 9:00 or 10:00, W. or F., 2:00; Mr. RHEA, 7 M. Also given in Summer School.

22. **Testing Dairy Products.** (2 Hrs.) Elective. A study of commercial tests for butterfat, moisture, acid and adulterants in dairy products; the arithmetic of milk and milk products. Prerequisite: Dairy husbandry 21. Laboratory fee, $2.00; refund $1.00 less breakage.

First semester; M., 2:00, S., 8:30; Mr. RHEA, 22 M.

23. **Milk Production.** (4 Hrs.) Elective. This course deals with the economical production of milk and with the most approved methods of handling the dairy herd, special attention being given to the breeding, feeding, keeping herd records, raising the dairy calf, and selection and use of sires. Lectures, assigned reading, quizzes, and judging. Prerequisite: Dairy husbandry 21.

Second semester; M. W. F., 8:00, M., 2:00; Mr. RHEA, 1 M.

27. **Market Milk.** (2 Hrs.) Elective. the milk supply of towns and cities; testing and sanitary conditions of milk; construction of dairies and milk bottling plants; transportation and delivery; certified, pasteurized, standardized, and modified milk; federal, state, and city ordinances. Lectures, assigned readings, and quizzes. Prerequisite: Dairy husbandry 23.

First semester; W. F., 9:00; Mr. RHEA, 1 M.

30. **Dairy Manufactures.** (3 Hrs.) Elective. Lectures, assigned readings, and quizzes. Prerequisite: Dairy husbandry 21. Laboratory fee, $2.00; refund $1.00 less breakage.

First semester; T. Th., 8:00, Th., 2:00; Mr. RHEA, 1 M.

31. **Creamery Management.** (2 Hrs.) Elective. Organization, construction, equipment and management of creameries; cream routes and cream gathering stations; visits to creameries with a view to studying their methods. Lectures, assigned readings, and quizzes. Prerequisite: Dairy husbandry 30.

Second semester; hours to be arranged; Mr. RHEA, 1 M.

ENTOMOLOGY.

Professor PEAIRS.

**1. General Entomology. (4 Hrs.) Required of sophomores. Laboratory and field work in collecting and mounting the more common local insects; classification of the insects collected; dissections and drawings of the external anatomy of various types. Text: Comstock's Manual for the Study of Insects. Laboratory fee, $1.00.

Second semester; M. W. F., 11:00, Th., 2:00; A.

Also given in Summer School.

*2. Economic Entomology. (2 Hrs.) Elective in the College of Agriculture and the College of Arts and Sciences. A general consideration of insect forms which directly affect the welfare of man and a discussion of methods of insect control. Adapted to the needs of the general student.

First semester; T. Th., 11:00; A.

*9. Horticultural Entomology. (2 Hrs.) Lectures and field observations on insect affecting fruit and vegetable crops with special consideration of control measures applicable to such forms.

Second semester; T. Th., 11:00; A.

*3. Advanced General Entomology. (3 Hrs.) Elective. Origin and development of insects; special structures, coloration, adaptations, structural and otherwise, internal anatomy. Lectures, assigned reference work and laboratory. Prerequisite: Zoology 1.

First semester; hours to be arranged; A.

*4. Systematic Entomology. (Credit in proportion to work done, not to exceed 3 hours a semester.) A continuation of the work in classification begun in Course 1. Detailed studies of certain groups.

Either semester or Summer School; hours to be arranged; A.

*5. Research Entomology. (Credit in proportion to work done, not to exceed 3 hours a semester). For students wishing to make entomology their major. Prerequisite: Entomology 3.

Either semester or Summer School; hours to be arranged; A.

*6. Insects and Disease. (1 Hr.) Lectures on the more common insects known to be, or suspected of being, responsible for the transmission of diseases of man and the higher animals.

Second semester; hours to be arranged; A.

8. Thesis. (1 or 2 Hrs.)

First and second semesters; hours to be arranged.

FARM MANAGEMENT.

Associate Professor DADISMAN.

*1. **Farm Management.** (3 Hrs.) Required of juniors. Choosing, equipping and operating a farm; types of farming; rental system; farm labor; cost production; successful marketing; farm records and accounts, etc. Field trips during the latter part of the semester. Prerequisite: Agronomy 2, Soils 1.

Second semester; M. W. F., 9:00.

2. **Rural Economics. (3 Hrs.) Required of seniors. Open also to graduate students. The study of economics as related to all phases of rural life. Prerequisite: Economics 1.

Second semester; M. W. F., 8:00.

3. **Advanced Farm Management.** (2 or 3 Hrs.) Open to seniors and graduate students. A continuation of Farm management 1 in the further study of farm operations and cost of production. Prerequisite: Farm management 1.

Second semester; hours to be arranged.

4. **History of Agriculture.** (3 Hrs.) Elective. The history of agriculture beginning with ancient references through all the stages of its development; early agricultural experiment station and their work; the West Virginia Station; the United States Department of Agriculture.

Second semester; hours to be arranged.

5. **Field Work.** (Credit in proportion to work done). Prerequisite: Farm management 1.

Summer School; hours to be arranged.

6. **Thesis.** (1 or 2 Hrs.)

Both semesters; hours to be arranged.

7. **Marketing Agricultural Products.** (2 Hrs.) Elective. A study of produce exchanges, methods of transportation, and municipal markets. Attention will be given to cooperation as a means for better marketing. Prerequisite: Economics 2.

Second semester; hours to be arranged.

HORTICULTURE.

Professor ALDERMAN, Associate Professor DACY, Assistant Professor AUCHTER, Mr. CRANE, Mr. PATCH, and Mr.....

Pomology.

*2. **Elementary Pomology.** (3 Hrs.) Required of sophomores. A general course covering the propagation of our common fruits and the planting and management of orchards. Laboratory fee, $2.00.

First semester; M. F., 10:00, T. W. or F., 2:00; Assistant Professor AUCHTER, H.

Also given in the Summer School in 1917 and alternate years.

4. **Systematic Pomology.** (3 Hrs.) Elective. The history, botany, and classification of fruits and their adaptation to West Virginia conditions. Prerequisite: Horticulture 2. Laboratory fee, $2.50.

First semester; T. Th., 9:00, Th., 2:00; Professor ALDERMAN, H.

5. **Small Fruits.** (3 Hrs.) Elective. Care and management of small fruit plantations; varieties and their adaptation to West Virginia soils and climate; packing, and marketing; study of experimental plots and varieties under test. Prerequisite: Horticulture 2 and 3.

Second semester; T. Th., 9:00, Th., 2:00; Mr....., H.

7. **Commercial Fruit Growing.** (4 Hrs.) Open to seniors and graduate students. An advanced course covering the study of commercial orchards in West Virginia. Prerequisite: Horticulture 2.

First semester; M. W. F., 9:00, S., 8:30; Assistant Professor AUCHTER. H.

9. **Advanced Practical Pomology.** (1 Hr.) A trip occupying one week's time will be made through the fruit regions of Eastern West Virginia, Maryland and Pennsylvania. The cost will not exceed thirty dollars. Prerequisite: Horticulture 2.

First semester; Professor ALDERMAN, H.

16. **Fruit Judging.** (1 Hr.) A course in fruit judging designed to train men for fruit judging teams and practical judging. Laboratory fee, $2.50.

First semester; hours to be arranged; Professor ALDERMAN and Assistant Professor AUCHTER. H.

18. **Advanced Fruit Judging.** (1 Hr.) A continuation of Horticulture 16. Laboratory fee, $2.50.

First semester; hours to be arranged; Professor ALDERMAN and Assistant Professor AUCHTER. H.

Olericulture.

*3. **Elementary Vegetable Gardening.** (3 Hrs.) Required of freshmen. Propagation; planting and care of the garden; hot beds and cold frames; garden soils and their treatment; fertilizers and manures; varieties of vegetables. Each student will be required to plan, plant and care for a garden 20 x 40 feet in area. Laboratory fee, $2.00; refund of $1.00 less breakage.

Second semester; T. Th., 10:00, T., 2:00; Associate Professor DACY and Mr. PATCH, H.

8. **Commercial Vegetable Gardening.** (4 Hrs.) Designed for students who wish to take up practical market gardening work. Geography of truck and market gardening; management of commercial enterprises; growing of special crops on a large scale; systems of cropping, packing and marketing. Laboratory exercises in the University market garden. Visits to some large markets and commercial plants. Prerequisite: **Horticulture 3.**

Second semester; M. W. F., 9:00, F., 2:00; Associate Professor DACY, H.

6. **Greenhouse Construction.** (2 Hrs.) Elective. Lectures and discussions upon modern greenhouse construction. Heating, ventilation, and adaptation of various types of houses to special crops and conditions. Laboratory work in drafting, designing and erecting greenhouses.

First semester; T. Th., 9:00; Associate Professor DACY, H.

15. **Greenhouse Management.** (3 Hrs.) Elective. A study of the principal flower, fruit and vegetable crops that are grown under glass. Laboratory exercises will include practical work in the college greenhouses.

First semester; M. W., 9:00, W., 2:00; Associate Professor DACY and Mr. PATCH, H.

14. **Rural Landscape Gardening.** (3 Hrs.) Elective. Designed to train leaders in rural betterment. A study of the principles of landscape gardening and civic art in their applications to the improvement of rural communities; the organization and direction of community activities.

Second semester; T. Th., 8:00, and M., 2:00; Associate Professor DACY and Mr. PATCH, H.

General Courses.

*13. **Plant Breeding.** (3 Hrs.) Required of seniors specializing in horticulture. Open also to graduate students. The principles of variation and heredity, together with theories of evolution and their practical application to problems of plant breeding; the status of genetics in agriculture and horticulture; problem work in biometry. Prerequisite: Botany 3 and 4.

First semester; M. W. F., 11:00; Professor ALDERMAN and Assistant Professor AUCHTER, H.

19. **Plant Breeding Practice.** (1 Hr.) Open to seniors and graduate students. Practice in plant breeding, including pollination, hybridization, selection, note taking, and general application of heredity theories to practice. Prerequisite: Horticulture 13.

Second semester; hours to be arranged; Professor ALDERMAN, H.

11. **Plant Industry Seminar.** (1 Hr.) Required of seniors and graduate students in horticulture and open to juniors. A joint seminor of the departments of Agronomy and Horticulture. Papers by members of the class upon subjects pertaining to their research or thesis work, or upon special problems. Discussion of special topics by members of the faculty.

First and second semester; hours to be arranged; Professor ALDERMAN, H.

10. **Thesis.** (1 or 2 Hrs.) For seniors and graduate students. Students should arrange their problem before the close of their junior year so that materials may be on hand and no delay be necessary in the following year.

First and second semesters; hours to be arranged; Professor ALDERMAN, H.

12. **Horticultural Research.** (1 or 2 Hrs. a semester.) Open to seniors and graduate students specializing in horticulture. Original problems will be investigated and a detailed report of the work done will be submitted.

First and second semesters and summer; hours to be arranged; Professor ALDERMAN, H.

17. **Summer Practice.** (1 Hr.) Open to juniors and seniors. One hour credit will be given for satisfactory reports made by students who spend the summer upon an approved fruit or truck farm. Application for credit must be by July 1st and a report submitted by October 1st.

Professor ALDERMAN or Associate Professor DACY, H.

POULTRY HUSBANDRY.

Assistant Professor ANDREWS.

*1 **Farm Poultry.** (3 Hrs.) Required of sophomores. Common breeds and varieties of poultry; the poultry house and its equipment; hatching and rearing chicks, care and management of flock; marketing poultry and poultry products; the most common poultry diseases, their prevention and treatment. Laboratory fee, $1.00.

Second semester; M. F., 10:00, S., 9:00.

5. **Housing and Feeding.** (3 Hrs.) Elective for juniors. Lectures on the various types of poultry houses, their location, construction and equipment; feeds and feeding; practice in constructing and remodeling houses and equipment, and making rations.

First semester; hours to be arranged.

6. **Incubation, Brooding and Rearing.** (2 Hrs.) Elective for juniors. Lectures on the fundamental principles involved in natural incubation and brooding; care and management of chick; construction and operation of incubators and brooders; egg testing.

Second semester; hours to be arranged.

7. **Breeds and Breeding.** (3 Hrs.) Elective for juniors. Lectures on the different classes, breeds and varieties, their origin, history, and classification; breeding for standard and utility; practice in judging poultry, selection and mating of flock.

First semester; hours to be arranged.

8. **Marketing.** (2 Hrs.) Elective for juniors. Lectures on marketing poultry and poultry products; anatomy of the fowl and the egg; sanitation; prevention and treatment of parasites and diseases.

Second semester; hours to be arranged.

9. **Flock Management and Poultry Diseases.** (2 Hrs.) Elective. Practice in caring for a pen of laying fowls, with records of cost of production; study of poultry diseases. The course may be taken at any time in connection with the above courses.

Either semester; hours to be arranged.

10. **Research.** (1 to 3 Hrs.) Elective for seniors. A study of methods of investigation together with the working out of some original problems.

Either semester; hours to be arranged.

VETERINARY SCIENCE.

Associate Professor LUEDER.

1. **Anatomy and Physiology.** (3 Hrs.) Elective. A systematic description of the bones, muscles, viscera, vascular, lymphatic and respiratory sytems. The structure of the ox, sheep, and pig, as contrasted and compared with that of the horse. The functions of the various organs and tissues of the body, the chemical constitution and physical laws which effect its growth, reproduction and development.

Second semester; T. Th., 9:00, laboratory, T., 2:00; 18 M.

2. **Diseases of Farm Animals and Materia Medica.** (3 Hrs.) Elective. A study of the important diseases of all domestic animals, methods of treatment and drugs for their cure. Prerequisite: Veterinary science 1.

Second semester; T. Th., 10:00, Th., 2:00; 18 M.

3. **Veterinary Science.** (3 Hrs.) Elective. A comparative study of the structures and functions of the different organs of the horse, ox, sheep and pig, cause, prevention, symptoms and first aid treatment of diseases of these animals.

Second semester; T. Th., 10:00, laboratory hours to be arranged; 18 M.

4. **The Horse.** (2 Hrs.) Elective. A study of the most successful methods of handling stallions, jacks and brood mares, care of the foal, growing and developing young horses for market and the mechanics of the horse. Prerequisite: Animal husbandry 40 and 43.

Second semester; F., 11:00, 2:00; 18 M.

5. **Parasites of Farm Animals.** (2 Hrs.) Elective. Lectures and text book study. Classification, life history and identification of the parasites of domestic animals; prevention of infection, symptoms and treatment of the animals; methods of control of the parasites. Prerequisite: Entomology or Zoology 1, and Veterinary science 1.

Second semester; M., 10:00, and laboratory hours to be arranged; 18 M.

III. INSTRUCTION IN HOME ECONOMICS.

ORGANIZATION.

For purposes of administration the department is organized under the College of Agriculture. The work involves three lines:

1. In the College of Agriculture a prescribed curriculum is outlined leading to the degree of Bachelor of Science in Home Economics.

2. In the College of Arts and Sciences students working for the degree of Bachelor of Arts may take Home Economics as a major and must meet the requirements for the degree as prescribed by that college (page 69). The head of the Department of Home Economics acts as class officer for such students.

3. Extension work is given under the direction of the Department of Agricultural Extension (page 236).

AIM AND SCOPE.

The course leading to the degree of Bachelor of Science in Home Economics is planned for women students, especially those who wish to teach home economics or to become leaders in those affairs which pertain to the administration of the home. Special emphasis is placed on the need of a knowledge of the general sciences in order to understand the principles fundamental to the technical courses in food, shelter, and clothing. Students are required to take courses in English composition as well as to acquire a knowledge of English literature. In order to obtain an appreciation of the science of production and consumption certain courses in industrial and economic history and sociology are prescribed. Courses in education are required to aid the student in relating subject matter to the individual in the home and school. Additional courses may be elected to meet the requirement of twenty hours for the state teacher's certificate.

ENTRANCE REQUIREMENTS.

For admission to the College of Agriculture for the course leading to the degree of Bachelor of Science in Home Economics, the candidate must have credit for fifteen units obtained by examination or on certificate from a duly accredited secondary school. Of the fifteen units which must be offered for admission, ten units are definitely prescribed as follows:

1. English: Students are admitted to English 1 on completion of a four-year high school course in English, or its equivalent, and re-

ceive credit for three or four units, as the instructor and the work done and certified justify.

2. Foreign Language: Two units of one language are required.

3. Mathematics: One unit of algebra and one of plane geometry are required.

4. History: One unit is required.

5. Science: One unit is required of either physics, chemistry, botany, zoology, or biology.

6. Elective: Enough from the following list to complete 15 units:

Drawing (free hand and mechanical)	1 to 2	units
French	1 to 3	"
German	1 to 3	"
Latin	1 to 4	"
Greek	1 to 3	"
Mathematics	½ to 1	"
Science	1 to 3	"
Social science (including history, civics and economics	1 to 4	"
Vocational subjects (including agriculture, commercial subjects, household arts, and manual training)	1 to 3	"

Prospective students are urged to take free-hand drawing if it can be secured in the secondary school.

For details of work required for each unit see page 58.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS.

Credits Required.

The degree of Bachelor of Science in Home Economics will be conferred upon any student who satisfies the above entrance requirements and offers one hundred and twenty-eight hours credit for college courses including a satisfactory thesis.

The " semester hour" is the standard of computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (eighteen weeks) and in one recitation hour with two preparation hours a week, or in three hours practice or laboratory work requiring no outside preparation. No student is permitted to register for less than fourteen hours or more than seventeen hours of work in any one semester.

Required and Elective Courses.

Of the one hundred and twenty-eight hours credit required for the degree seventy-six hours are definitely prescribed as indicated in

the curriculum which follows. The remaining fifty-two hours credit must be elected from such courses as may be prescribed by the class officer.

Class Officer.

The head of the Department of Home Economics will act as class officer.

All students who wish to enter the university for the purpose of taking home economics should confer with the head of the department before registering.

Thesis.

Each candidate for the degree of Bachelor of Science in Home Economics will be required to prepare a thesis on some subject related to the work in home economics. The thesis will be based upon the student's personal work. The subject of the thesis must be presented in writing to the head of the home economics department by the first of November of the academic year in which the student is a candidate for a degree. The completed thesis must be presented for approval not later than thirty days prior to commencement day.

Classification of Students.

To be classified as a conditioned freshman a student must have credit for at least thirteen units of entrance requirements; to be classified as a regular freshman she must have fulfilled all entrance requirements. To be classified as a sophomore she must have credit for twenty-five hours of college work; as a junior, fifty-eight hours; as a senior, ninety-two hours.

Admission with Advanced Standing.

Students from other institutions will be given credit for work already done in accordance with the general rules for advanced standing (See page 32), but at least one year of resident work will be required for the baccalaureate degree in home economics.

Special Students.

Persons who do not desire to become candidates for a degree, may, by the permission of the committee on classification and grades, be admitted as special students, subject to the provisions set forth on page 32.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS.

Freshman Year—First Semester.

			Hrs.	
Composition and rhetoric	(English 1)	8:00 M. W. F.	3	
Inorganic chemistry	(Chem. 1)	9:00 M. W. F.	4	
Selection and preparation of food	(H. E. 1)	9:00 T. Th., 10:00-12:00 T. Th.	4	
Agricultural botany	(Botany 3)	8:00 T. Th., 2:00 W. F.	4	15

Freshman Year—Second Semester.

Composition and rhetoric	(English 2)	8:00 M. W. F.	3	
Inorganic chemistry	(Chem. 2)	9:00 M. W. F.	4	
Selection and preparation of food	(H. E. 2)	9:00 T. Th., 10:00-12:00 T. Th.	4	
Agricultural botany	(Botany 4)	8:00 T. Th., 2:00 W. F.	4	15

Possible electives: Zoology 1 and 2 may be substituted for Botany 3 and 4; or Botany 4 for Zoology 2.

Sophomore Year—First Semester.

Applied design	(H. E. 11)	8:00-10:00 M. W. F.	3	
English literature	(English 26)	8:00 T. Th.	2	
Principles of study	(Ed. 17)	10:00 M. W. F.	3	
English social and industrial history	(History 19)	11:00 M. W. F.	3	
General bacteriology	(Botany 10)	11:00 T. Th., 2:00 T.	3	14

Suggested elective: Home economics 22 or English.

Sophomore Year—Second Semester.

Home decoration	(H. E. 14)	8:00-10:00 M. W. F.	3	
English literature	(English 27)	8:00 T. Th.	2	
Psychology of learning and teaching	(Ed. 12)	10:00 M. W. F.	3	
American social and economic history	(History 29)	11:00 M. W. F.	3	
Sewing	(H. E. 13)	2:00 T. Th., 9:00 S.	3 or 4	15

Suggested elective: Home economics 23 or English.

Junior Year—First Semester.

Dietetics	(H. E. 24)	10:00-12:00 M., 11:00 T.	2	
Home cookery	(H. E. 21)	11:00-1:00 W., 11:00 Th., 10:00-12:00 F.	3	
Textiles	(H. E. 12)	9:00 M. F., 8:00-10:00 W.	3	
Electives			8	16

Suggested electives: Chemistry 16, Education 4, or Home economics 16.

Junior Year—Second Semester.

Foods Group.

			Hrs.	
Dietetics	(H. E. 25)	10:00-12:00 M., 11:00 T. Th.	3	
Hygiene and sanitation	(Bact. 5)	8:00 T. Th.	2	
Home cookery	(H. E. 20)	11:00-1:00 W., 10:00-12:00 F.	2	
Electives			9	16

Clothing Group.

Textiles	(H. E. 15)	9:00 M. F., 8:00-10:00 W.	3	
Hygiene and sanitation	(Bact. 5)	8:00 T. Th.	2	
Garment construction	(H. E. 17)	10:00-12:00 M. W. F.	3	
Electives			8	16

Suggested electives: Home economics 15, or Education 5.

Senior Year—First Semester.

Regular Course.

Sociology	(Soc. 1)	8:00 M. W. F.	3	
Electives			13	16

Teachers' Group.

Sociology	(Soc. 1)	8:00 M. W. F.	3	
Principles and art of teaching	(Ed. 10)	9:00 M. W. F.	3	
Home economics in public schools	(H. E. 26)	10:00 T. Th.	2	
Electives			8	16

Suggested electives: Home economics 16 or 18, Education 3, or Mechanical drawing 21.

Senior Year—Second Semester.

Regular Course.

Child welfare	(Soc. 8)	8:00 T. Th.	2	
Electives			14	16

Teachers' Group.

Child welfare	(Soc. 8)	8:00 T. Th.	2	
Teaching high school subjects	(Ed. 22)	9:00 T. Th.	2	
Teachers' course in home economics	(H. E. 27)	9:00 M. W. F.	3	
Electives			9	16

Suggested electives: Home economics 17, 20, or 24, or Education 2.

COURSES IN HOME ECONOMICS.

Associate Professor COLWELL, Miss OLIVER, Miss NUZUM, and Miss.....

1. Selection and Preparation of Food. (4 Hrs.) A study of the chemical composition, relative physiological and economic value of the animal foods and their products; processes in the production of raw food material. It is recommended that Chemistry 1 and 2 precede or parallel this course. Laboratory fee, $2.00.

First semester; T. Th., 9:00; laboratory sections (limited to twenty students each), for students in College of Agriculture, T. Th., 10:00-12:00; for advanced students, M. W., 2:00; other sections, T. Th., 2:00; Associate Professor COLWELL and Miss NUZUM, 2 W.

2. Selection and Preparation of Food. (4 Hrs.) Continuation of course 1. A study of the chemical composition and relative physiological and economic value of the vegetable foods and their products; processes in the production of raw food material; principles of diet. Prerequisite: Same as in course 1. Laboratory fee, $2.00.

Second semester; T. Th., 9:00; laboratory sections (limited to twenty students each), for students in College of Agriculture, T. Th., 10:00-12:00; for advanced students, M. W., 2:00; other sections, T. Th., 2:00; Associate Professor COLWELL and Miss NUZUM, 2 W.

31. Selection and Preparation of Food. (3 Hrs.) Similar to course 1. For students who offer cooking for entrance. Laboratory fee, $1.50.

First semester; T. Th., 9:00; laboratory section, F., 2:00; Associate Professor COLWELL and Miss NUZUM, 2 W.

32. Selection and Preparation of Food. (3 Hrs.) Similar to course 2. For students who offer cooking for entrance. Laboratory fee, $1.50.

Second semester; T. Th., 9:00; laboratory section, F., 2:00; Associate Professor COLWELL and Miss NUZUM, 2 W.

3. Hygiene. (2 Hrs.) Open to all women students. The purpose of this course is to give a knowledge of the laws fundamental to normal health and its maintenance and of the relation of the individual to the home. (Omitted 1917-18).

First semester; M. F., 10:00; Associate Professor COLWELL. 9 W

9. Hygiene of the Family Group. (2 Hrs.) The purpose of this course is to give a knowledge of those principles of sanitation which are essential to the well-being of the family group. Prerequisite: Home economics 3.

Second semester; M. F., 10:00; Associate Professor COLWELL and Assistant, 9 W.

21. Home Cookery. (3 Hrs.) This course includes a study of amounts; cost; season; dietetic value of food combinations suitable for the statistical family for breakfast, luncheon or supper, and dinner. Prerequisite: Home economics 1 and 2. Laboratory fee, $3.00.

First semester; Th., 11:00; laboratory, W., 11:00-1:00; F., 10:00-12:00; Associate Professor COLWELL and Miss NUZUM, 1 W.

Second semester; (by arrangement with instructors before registration); Associate Professor COLWELL and Miss NUZUM. 2 W.

20. Home Cookery. (2 Hrs.) Continuation of course 21. Prerequisite: Same as in course 21. Laboratory fee, $3.00.

Second semester; Th., 11:00; laboratory, W., 11:00-1:00; F., 10:00-12:00; Associate Professor COLWELL and Miss NUZUM. 1 W.

22. Demonstrations. (2 Hrs.) This course includes a study of how to select and how to present the subject of foods before organizations or groups of rural people. Prerequisite: Home economics 1 and 2. Laboratory fee, $1.00.

First semester; T. Th., 4:00: Miss NUZUM. 2 W.

23. Demonstrations. (2 Hrs.) Continuation of course 22. Prerequisite: Home economics 1 and 2. Laboratory fee, $1.00.

Second semester; T. Th., 4:00; Miss NUZUM. 2 W.

24. Dietetics. (2 Hrs.) The fuel value of foods; the relation of the different foodstuffs to the fuel value and to the cost of foods; determining the food requirements; the energy, protein and mineral requirement of the normal adult; diet to meet these requirements. Prerequisite: Home economics 1 and 2. Parallel course, Home economics 21. Laboratory fee, $2.00.

First semester; T., 11:00; laboratory. M., 10:00-12:00; Associate Professor COLWELL. 9 W.

25. Dietetics. (3 Hrs.) A study of digestion, absorption, assimilation of the foodstuffs; amounts of food required for the nutrition of the normal adult at rest and at work; diet for infancy, yuoth, old

age; special diets; cost of family dietaries. Prerequisite: Chemistry 16, Home economics 1, 2, 21, 24.

Second semester; T. Th., 11:00; laboratory, M., 10:00-12:00; Associate Professor COLWELL, 9 W.

26. Home Economics in Public Schools. (2 Hrs.) Open only to seniors. A brief survey of the development of home economics and its present status. Establishment of standards by means of which subject matter may be selected for elementary, secondary, and rural schools. Parallel course, Education 10. Prerequisite: All required home economics courses.

First semester; T. Th., 10:00; Associate Professor COLWELL, 9 W.

27. Teachers' Course in Home Economics. (3 Hrs.) This course includes a study of sequence of subject matter in planning courses of study in public schools; special methods of presentation; correlation with other subjects in the schools. Prerequisite: Home economics 26.

Second semester; M. W. F., 9:00; Associate Professor COLWELL, 9 W.

8. Special Problems. (4 Hrs.) Open to juniors and seniors. Thesis course. This course is designed to give advanced work in foods and related home economic problems. Lectures, conferences, laboratory work. Prerequisite: Home economics 1, 2, and 4; Chemistry 1 and 2; Botany 1 and 2, or Zoology 1.

Second semester; M. W., 9:00; laboratory. T. Th., 1:15; Associate Professor COLWELL. 2 W.

11. Applied Design. (3 Hrs.) The principles governing the use of line and color are directly applied to home furnishings, dress, reed and raffia basketry, and to original designs developed from nature study. Application of designs to book covers; to stencil and block printing; and to textiles.

First semester; laboratory section for major students, M. W. F., 1:30; other sections, T. Th.. 1:30, S., 9:30; Miss OLIVER and Miss ....., 8 W.

12. Textiles. (3 Hrs.) History and evolution of the textile industries; manufacturing conditions which affect the economics, hygieneic, and æsthetic value of the material; household tests and grading of textile materials.

First semester; M. F., 9:00; laboratory, W., 8:00-10:00; Miss ....., 8 W.

13. Sewing. (3 Hrs.) This course includes hand sewing; the

use of the sewing machine and its attachments; the use of commercial patterns.

Second semester; for students in College of Arts and Sciences, M. W. F., 8:00-10:00; for students in College of Agriculture, T. Th., 2:00, S., 9:00; Miss....., 8 W.

43. Sewing. (4 Hrs.) Similar to course 13, for those students who do not offer sewing for entrance.

Second semester; M. W. F., 2:00, S., 9:00; Miss OLIVER, 8 W.

14. Home Decorations. (3 Hrs.) A study of the structural lines and decoration of the home, including problems in the arrangement of furnishinsg, treatment of the walls, floor and ceiling; and the selection of furnishings for an estimated cost.

Second semester; for students in the College of Arts and Sciences, M. W. F., 8:00-10:00; for students in College of Agriculture, M. W. F., 2:00; Miss OLIVER, 8 W.

15. Textiles. (3 Hrs.) A study of the chemical and microscopic nature of textile fibres; the different weaves and their physical, chemical and microscopic examination of textiles, dyeing, weaving, and a selection of textile fabrics suitable for use in home furnishing and clothing.

Second semester; M., 9:00, F., 8:00-10:00; Miss....., 8 W.

16. Costume Designing. (2 Hrs.) This course includes a study of historic costume and its influence on modern dress; original designs for dresses for various occasions and designs suitable for different figures.

First semester; T. Th., 10:00-12:00; Miss OLIVER, 8 W.

17. Garment Construction. (3 Hrs.) Drafting, modeling, and designing patterns for various costumes to be made in the laboratory. A study will be made of hygienic and economic problems of the home-made garment as compared to the factory product.

Second semester; M. W. F., 10:00-12:00; Miss OLIVER, 8 W.

18. Home Planning. (3 Hrs.) Evolution of the house; location and construction of the modern houses are studied from the sanitary, economic and artistic point of view; a study of architectural styles; designing of floor plan and elevations of a house for an estimated cost.

First semester; M. W. F., 10:00-12:00; Miss OLIVER, 8 W.

19. Modern and Period Furnishings. (2 Hrs.) Modern and period decorations and furnishings; original designs showing harmonious treatments in selection and arrangement of furnishings.

Second semester; T. Th., 10:00-12:00; Miss OLIVER, 8 W.

IV. AGRICULTURAL EXTENSION DEPARTMENT.

The Agricultural Extension Department was established by the University in 1907. Further support was given by an act of the State Legislature in 1913, legally establishing and defining the work of the Department. This law is in part (Part of Sec. 172, Chapter 71, Acts of 1913), as follows:

"That, in order to promote the improvement and advancement of agriculture, domestic science and rural life among the people to the several counties of the State of West Virginia, there be and is hereby created and established in the college of agriculture, at West Virginia University, an agricultural extension department to be co-ordinate with the department of instruction and the agricultural experiment station.

"The work of the agricultural extension department of the college of agriculture shall be conducted under such rules, regulations, and methods as may be prescribed by the state board of regents, and said work shall consist of holding extension schools in the various counties of the state, at which instruction shall be given in soil fertility, horticulture, stock raising, crop production, dairying, domestic science and kindred subjects; of conducting farmers' institutes; of giving demonstrations in orcharding, soil improvement and crop production; of furnishing speakers and exhibits for special agricultural trains; of giving instruction and demonstrations at agricultural fairs, farmers' institutes, clubs, granges, or any other organizations that may be useful in extending agricultural knowledge; of conducting, in co-operation with the United States Department of Agriculture, boys' and girls' agricultural clubs; of recommending county agricultural agents and of supervising and assisting them in advancing interests of their respective counties; of giving instruction in agriculture and domestic science by mail and by newspaper articles; and of such other methods as may carry the benefits of the work of the colleges of agriculture, the agricultural experiment stations, and the United States Department of Agriculture to the people of the several counties of the state; and all such itinerant educational work in agriculture and the home economics carried on under appropriations made by or to this state shall be under the control or supervision of said agricultural extension department."

The work of the Agricultural Extension Department is also supported by an act of Congress, approved May 8, 1914, known as the Smith-Lever Act, which provides a gradually increasing appropriation for demonstration work in agriculture and home economics contingent upon equal appropriations by the state.

FORMS OF WORK.

The following forms of agricultural extension work are now conducted in the various sections of the state:

1. Agricultural schools and schools of home economics, held for one week at a suitable center in each county.

2. Farmers' institutes wherever they may be of service to the farmers and their families.

3. Demonstrations in pruning fruit trees, spraying fruit trees, thinning fruit, packing fruit, mixing commercial fertilizer, corn variety tests, growing of legumes and the keeping of farm and household records and accounts.

4. The encouragement of the teaching of agriculture in the public schools by:

(a) Supervision of the agricultural courses of study, instructional work at teachers' institutes, round table meetings, conferences of county and district teachers, and special lectures at granges, clubs, and other organizations interested in the teaching of agriculture in the public schools. (This work is in cooperation with the State Department of Free Schools at Charleston).

(b) Organizing boys' and girls' clubs for growing and judging corn, potatoes, growing and canning vegetables, etc. (This work is in cooperation with the U. S. Department of Agriculture.

(c) A monthly circular letter on elementary agriculture for school teachers.

5. Agricultural railway trains with lectures and exhibits on horticulture, soils, farm crops, market gardening and animal industry.

6. Educational exhibits at state and county fairs.

7. Farmers' reading circle courses.

8. Publications:

Boys' and Girls' Agricultural Club Circulars.
Agricultural press service.
West Virginia School Agriculture.

9. Supervision of the county agricultural agents and demonstrators.

(This work is in cooperation with the Farmers' Cooperative Demonstration Work, U. S. Department of Agriculture.)

10. Correspondence: This includes the identification of plants and insects, inquiries covering agricultural problems, and assistance to the school, the home or other organizations in advancing movements to increase the worth and dignity of a rural life.

For further information concerning the work of this department, address Director C. R. Titlow for a special bulletin.

THE FARMERS' WEEK.

The Farmers' Week consists of popular lectures, demonstrations, and exercises planned for the benefit of various classes of farmers and farm women. The faculty are assisted by speakers who have been unusually successful, and who are known as experts in the particular line in which they give instruction. The detailed work given is changed from year to year.

In order to meet the needs of as large a number of persons as possible, lectures on the following subjects will be given: General agriculture, Animal industry, Horticulture, Poultry husbandry, and Home economics. The work consists of practical and scientific lectures and practice work in the laboratory or barn, or on the University farm. The instructional work is given by the regular teachers of the College of Agriculture and by practical agricultural and home economics experts who are familiar with our problems. A valuable feature is the series of evening meetings where addresses will be made by some of the most prominent speakers of Wst Virginia and other states.

The Farmers' Week is open to everyone over sixteen years of age. The work is designed for men of middle age as well as for the young farmer. There are no entrance examinations. A special course is given for boys and girls.

Expenses. No fees will be charged those attending Farmers' Week. No text-books will be required, though some may be used to advantage for reference. Board and room may be secured at $5.00 to $6.00 per week. The total expense of the course, inclusive of railroad fare, need not exceed $12.00.

Detailed announcements for the course in 1918 may be obtained upon application to the Dean of the College of Agriculture or to the Director of Agricultural Extension, Morgantown, West Virgina.

THE COLLEGE OF LAW

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

HENRY CRAIG JONES, A.B., LL.B., *Dean and Professor of Law*

WILLIAM P. WILLEY, A.M., *Professor of Law, Emeritus*

JAMES RUSSELL TROTTER, A.M., LL.B., *Professor of Law*

THOMAS PORTER HARDMAN, M.A., LL.B., JUR. DR., *Associate Professor of Law*

JAMES WIGGINS SIMONTON, A.B., J.D., *Associate Professor of Law*

DAVID CLYDE HOWARD, A.M., LL.B., *Associate Professor of Law*

LEO CARLIN, A.B., LL.B., *Assistant Professor of Law*

CHARLES EDMUND NEIL, A.M., *Professor of Public Speaking*

IRA E. ROBINSON, *Former President Supreme Court of Appeals, Special Lecturer*

Judges of the Practice Court and Special Lecturers on Practice for 1916-17.

JOHN T. GRAHAM, *Judge Sixth Judicial Circuit*

WARREN B. KITTLE, *Judge Nineteenth Judicial Circuit*

HAYMOND MAXWELL, *Judge Thirteenth Judicial Circuit*

JOHN C. McWHORTER, *Former Judge Twelfth Judicial Circuit*

HOMER B. WOODS, *Judge Third Judicial Circuit*

RONALD FARROW MOIST, A.B., *Secretary*

JAMES EDWARD KENNEDY, A.B., *Assistant Law Librarian*

ROBERT EMMETT O'CONNOR, A.B., *Assistant Law Librarian*

EDGAR CURRAN GLASS, *Assistant Law Librarian*

HISTORY AND PURPOSE.

The College of Law was established in 1878 and is the oldest professional school in the University. It is the only law school in the state of West Virginia. A large proportion of the bench and bar of West Virginia have been enrolled among its students.

Its course of instruction for the degree of Bachelor of Laws, originally requiring but one and later two years of law study, was in 1912, fixed at three years. In 1913 a requirement of one year of college work for admission was added.

In 1914 the College of Law was admitted to membership in the Association of American Law Schools, an organization of the leading law schools of the United States for the purpose of establishing and maintaining high standards of legal education.

The purpose of the instruction given in the College of Law is to train the student thoroughly in the principles and procedure of the common law with particular reference to their application or modification by decision and statute in West Virginia.

EQUIPMENT.

The College of Law occupies about one-half of the second floor of Woodburn Hall. About one-half of this space is used by the law library and the private offices of the six full-time members of the law faculty. The remainder is devoted to one class room, a court room for the practice court (also used as a class room), and a clerk's and sheriff's office.

THE LAW LIBRARY.

The Law Library numbers about 10,000 volumes. It contains chiefly the reports of all the States, except two, either to the National Reporter System or complete (including several sets of West Virginia reports), the complete National Reporter System, the complete reports of the United States Supreme Court and the other Federal courts, the American Decisions, American Reports, Lawyers' Reports Annotated (both series), the various encyclopedias of law, the Century and Decennial digests, the American Digest, Key-Number Series, to date, a collection of English reports containing the English Reprint and the Law Reports, complete sets of leading English and American legal periodicals, over 600 volumes of text-books, a nearly complete collection of the various codes and acts of Virginia and West Virginia, and about 400 volumes of briefs and records of cases decided by the Supreme Court of Appeals of West Virginia.

ENTRANCE REQUIREMENTS.

CANDIDACY FOR THE DEGREE OF BACHELOR OF LAWS.

The following persons will be admitted to the College of Law as candidates for the degree of Bachelor of Laws:

(a) Graduates of colleges of approved standing.

(b) Those having credit: (a) for fifteen units preparatory work (see below), and (b) for not less than 32 hours of work of collegiate grade in an institution of approved standing, which must include six hours of English (English 1 and 2 or equivalent), three hours of economics, and six hours of history. Persons having credit for all preparatory entrance requirements and twenty-nine of the thirty-two required hours may be granted admission to the first year class, conditioned upon the removal of such deficiency before the opening of the following year.

The fifteen units of preparatory work which are required as stated in (a) above include the following:

1. English: Students are admitted to the freshman classes in English on completion of a four year high school course in English, or its equivalent, and receive credit for three or four units.

2. Latin: Two units are required.

3. Mathematics: One unit of algebra and one of plane geometry are required.

4. History: One unit is required.

5. Science: One unit is required of either physics, chemistry, botany, zoology, or biology.

6. Elective: Enough is required from the following list to complete 15 units:

Drawing (free hand and mechanical)	1 to 2 units
French	1 to 3 "
German	1 to 3 "
Greek	1 to 3 "
Latin	1 to 2 "
Science	1 to 3 "
Social Science (including history, civics and economics)	1 to 3 "
Mathematics	½ to 1 "
Vocational subjects (including agriculture, commercial subjects, and manual tarining)	1 to 3 "

Other subjects which have a recognized place in the first-class high schools will also be accepted by the committee on entrance.

A single unit of language will not be accepted unless further work in that language is included in the 32 hours of work of collegiate grade offered.

For a detailed statement of the amount of work required for each unit of entrance credit see the University Catalogue, page 58.

SPECIAL STUDENTS.

In rare instances persons who cannot qualify as candidates for the degree of Bachelor of Laws may be admitted as special students on petition to the committee on entrance, approved by the faculty of the College of Law. The applicant must show that he is more than 22 years of age, that he is unable to pursue such studies as will qualify him for admission as a regular student, that he possesses such educational training and practical experience as should enable him to pursue the study of law satisfactorily, and that he has satisfied the academic requirements specified by the order of the Supreme Court of Appeals, passed May 6, 1915, as preliminary to law study for all persons seeking admission to the bar in West Virginia. (See page.....). Permission to enter as a special student will be granted only in exceptional cases and will be subject to termination for unsatisfactory scholarship or conduct.

STUDENTS IN OTHER COLLEGES.

Students of at least junior standing in other colleges of the University may be permitted to take work in the College of Law subject to the regulations of the College where they are registered and of the College of Law, but conditioned in each case upon the consent of the instructor giving the course which such student desires to take.

ADMISSION TO COMBINED COURSE.

A student may secure the degrees of Bachelor of Arts and Bachelor of Laws in six years under the following regulation of the College of Arts and Sciences:

Any candidate for the A.B. degree, who, at the end of the junior year has completed 96 semester hours and who has satisfied all other requirements of the College of Arts and Sciences for this degree, may in his senior year take the full first year of the law course, and upon completion of the same shall be entitled to receive the degree of Bachelor of Arts. But if a student has to his credit 92 semester hours at the end of his junior year, he may, subject to the approval of the dean of the College of Arts and Sciences and the dean of the

College of Law, be allowed to enter upon the first year of the work of the law course, in which case the degree shall be withheld until he attain four additional credit hours. Such cases, however, shall be treated as exceptions and the student is urged to complete the entire 96 hours of required work in the College of Arts and Sciences before beginning the study of law. No student may substitute the first year of law as above provided, who shall have failed to maintain a uniform record of good scholarship to the end of his junior year in the College of Arts and Sciences.

No work included in the above 96 credits and counted toward the A.B. degree may be again counted toward the LL.B. degree.

ADMISSION TO ADVANCED STANDING.

Applicants for admission to advanced standing must satisfy the following requirements:

1. Compliance with the requirements for admission to the first year class.

2. For admission to the second year class, applicants must have successfully pursued the study of law for at least one year in an approved law school, where they have received credit for courses equivalent to those required for admission to the second year class in the College of Law.

3. For admission to the third year class, applicants must have successfully pursued the study of law for at least two years in an approved law school where they have received credit for courses equivalent to those required for admission to the third year class in the College of Law.

No credit will be given for work done in a law office.

No student may receive the degree of Bachelor of Laws without at least one year's residence in the University and the successful passing of courses aggregating thirty semester hours pursued in the College of Law.

Any applicant for advanced standing may also, in the discretion of the law faculty, be required to undergo an examination in any or all of the subjects presented for advanced standing.

REQUIREMENTS FOR DEGREES.

BACHELOR OF LAWS.

Students who have satisfied the preparatory and college requirements for entrance to the College of Law as candidates for the degree of Bachelor of Laws, and who have satisfactorily completed courses aggregating eighty-six hours, distributed over three years residence and who have otherwise satisfied the requirements of the University and of the College of Law, will be granted the degree of Bachelor of Laws.

The eighty-six hours offered by a student for the degree of Bachelor of Laws must include the following courses: Contracts, Personal property, Agency, Torts, Common law pleading, Criminal law and procedure, Real property I, Real property II, Evidence, Equity jurisdiction I, Practice and procedure, and Practice court.

Such students as may be required to take military science after enrolling in the College of Law will be permitted to substitute one year's work in military science for two hours of law.

ADMISSION TO THE BAR.

Under the provisions of ch. 119, sec. 1, of the West Virginia Code, those who receive the degree of Bachelor of Laws from the West Virginia University may be admitted to the bar without further examination.

By an order of the Supreme Court of Appeals, those members of the faculty of the College of Law of the rank of professor, associate professor, or assistant professor, are constituted the State Board of Law Examiners for the purpose of examining candidates for admission to the bar. In performing its duties as the State Board of Law Examiners the law faculty acts under the control and supervision of the Supreme Court of Appeals.

The bar examinations are held at Charleston and Morgantown simultaneously on the second Wednesday, Thursday, and Friday of March and September.

An order of the Supreme Court of Appeals entered May 6, 1915, provides that persons applying for license to practice law in West Virginia must satisfy the following requirements as to period of study and degree of preparation:

"(a) A preliminary academic education equivalent to that required for graduation from a high school of the first class in West Virginia, which may be evidenced by a diploma of graduation from such a high

school or by a certificate showing equivalent credits from any other school whose credits would be accepted for admission to West Virginia University, or by passing an examination on equivalent subjects.

"(b) Three years of diligent law study as a student in the office of and under the direction of, a member of the bar of this State (or another state), or as a resident student in an approved law school, evidenced by a certificate to the State Board of Law Examiners by the attorney under whom, or the head of the law school at which, such study was pursued, showing in detail the work done. In interpreting the above requirement, not less than ten months, exclusive of vacations, shall constitute one year of office study, and not less than eight months, exclusive of vacations, shall constitute one year of law school study."

Information as to bar examinations and as to other matters relating to admission to the bar may be obtained upon inquiry directed to the State Board of Law Examiners, Morgantown.

HONORS AND PRIZES.

STUDENT EDITORS.

From among the men of high rank in the second and third year classes the faculty chooses the student editors of the Note Department of the West Virginia Bar, the official publication of the West Virginia Bar Association. The Department appears in the issues of November, January, April and June. The notes and recent cases are the work of the student editors.

AMERICAN LAW BOOK COMPANY PRIZE.

The American Law Book Company has placed at the disposal of the faculty of the College of Law a set of the **Cyclopedia of Law and Procedure**, commonly called **Cyc**, with its annual annotations to date, to be given as a prize to the student in the College of Law who shall take the highest scholarship honor for the period of his **third** year.

No student will be deemed eligible to receive the above prize unless he is to receive the degree of Bachelor of Laws in June of the year for which the prize is offered and unless he shall have completed not less than thirty hours of law work during the ten months preceding.

"Highest scholarship honor" means highest average in all courses taken by the student in his third year.

The student to whom the above prize shall be awarded each year, will be eligible to compete for one of the three Corpus Juris Scholarships, of the cash value of $500.00 each, offered by The American

Law Book Company for the purpose of one year's graduate work in law at an approved law school either in the United States or abroad. The Corpus Juris Scholarships are awarded by a committee of law school professors to the writers of the best three theses on an assigned law subject, submitted by the respective winners of the Cyclopedia of Law and Procedure prizes in those law schools through which it is offered.

This prize was awarded for 1916 to Stanley Bruce Wilson, A.B. 1914, LL.B. 1916, of Moundsville.

UNIVERSITY FEES AND EXPENSES.

Students in the College of Law who are not State cadets are charged:

A tuition fee of $15.00 a semester or $25.00 a year if residents of West Virginia, and $30.00 a semester or $50.00 a year if non-residents.

A matriculation fee of $5.00 payable upon entering the University.

A contingent fee of $3.00 per semester.

All students in the College of Law are also charged:

An athletic fee of $2.50 per semester.

A medical fee of $2.00 per semester.

A diploma fee of $5.00 payable at the beginning of the semester in which the student expects to receive his degree.

A fee of $2.00 each semester is charged for registration and the issuance of class cards. This fee is remitted to all students who procure class cards during the first three days of the first semester, and the first two days of the second semester.

Each cadet upon entering the corps must pay $17.50 for a uniform.

Refunding of Tuition and Fees.

Students who withdraw from the University for good and sufficient reasons during the first two weeks of the semester, will have their tuition refunded upon making application to the registrar, but matriculation, contingent, athletic and registration fees will not be refunded.

Students who have paid tuition for the year and who for any reason cannot attend during the second semester, may have the excess paid above the amount of one semester's tuition refunded, upon application.

Students who receive appointment as state cadets after the payment of tuition and fees, but before the first nine weeks of the semester have elapsed, may have refunded to them all tuition and fees not properly chargeable to state cadets.

COST OF A YEAR'S WORK.

Board and lodging may be obtained in Morgantown for from $4.00 to $5.00 a week. Furnished rooms may be obtained at from $1.00 to $1.50 a week with two in a room. Board in private families or in students' boarding clubs costs from $3.75 to $5.00 a week. A student's washing will cost usually from $10.00 to $18.00 a year, his textbooks from $8.00 to $30.00 a year, and his contingent and athletic fees from $15.00 to $35.00 a year. To these fixed charges must also be added matriculation, tuition, diploma, and laboratory fees, in the case of students who are required to pay them. Travelling expenses, clothing, and miscellaneous expenses will depend largely upon the tastes and habits of the individual. In general it may be said that the legitimate cost of a nine months' term of residence at the University ranges from $250.00 to $350.00, exclusive of travelling expenses.

Text-books are kept for sale in the University book store. A book exchange is maintained by the College of Law where second hand law books may be sold or bought without any commission being charged.

State cadets are furnished their stationery free and text-books to the value of $15.00.

COURSES AND EXAMINATIONS.

COURSES.

All courses extend either throughout the entire year or through one semester. No credit will be given for less than an entire course except by special order of the law faculty. Grades given at the end of the first semester in courses extending throughout the year are merely indicative of the quality of work done by the student to that point and do not give credit for the part of the course so far pursued. Such first semester grade may be considered in determining the final grade. Any student who fails in the first semester's work in any such course will not be permitted to continue that course.

EXAMINATIONS.

Students are required to take all regular examinations. No student who absents himself from any such examination without being excused therefrom by the faculty of the College of Law, will receive credit unless he repeats the course successfully. If absence from a

final examination is granted by the faculty, the student's grade in that course will be withheld until he has passed the next examination for the removal of conditions in the course. Application for leave to be absent from a regular examination must be made before the hour at which such examination closes.

Regular Examinations are held at the end of each semester in all courses. The period devoted to such examinations and the length of time of each examination are determined by the faculty of the College of Law.

Examinations for Removal of Conditions are held during the seven days immediately following the day for mid-semester reports in the second semester and the seven days immediately following the opening of the University in the fall. No other special examinations are given.

GRADES.

Reports of students' grades are made at the end of each semester. If such grade be at the end of the course, it is the student's grade for the course; if at the end of the first semester in a course extending throughout the year, it is merely indicative of the quality of the student's work that far in the course.

In determining grades the instructor gives such weight as he deems best to examinations, daily recitations, and attendance. He may refuse examination to any student because of poor attendance. One per cent. is deducted by the Registrar from the grade reported by the instructor for each unexcused absence in the course during the semester for which the grade is given.

The privilege of final examination is denied a student absent, for any cause, from 20% of the class periods of a course, or from 25% of the class periods of the last semester of a course running through the year. The privilege of mid-year examination is denied a student absent, for any cause, from 25% of the class periods of the first semester, in a course running through the year, and he will be requested to drop the course. The operation of this rule may be suspended by the law faculty in cases where substantially all of the absences were unavoidable, but in all such cases the time lost must be made up by attendance at an approved law school before the student will be recommended for a degree or before his attendance will be certified to another law school.

Students who fail in any course are given no credit for it.

A student who is conditioned in any course will receive no credit for it unless he pass the next examination for removal of conditions in that subject, provided, however, that the faculty may require a

student to complete certain supplementary work in lieu of such examination or in addition thereto.

The law faculty may warn any student whose work is deemed unsatisfactory, place him on probation, or refuse his re-registration in the College of Law.

METHOD OF INSTRUCTION.

The work of the students in courses other than those in drafting and the practice court is based chiefly upon the study and discussion of decided cases, with collateral reading of statutes, approved text-books and periodicals, elucidated by free discussion in the class. In this manner are developed the grasp of fundamental principles and the powers of legal reasoning, discrimination and judgment, qualities indispensable to the practicing lawyer.

COURSES IN PRACTICE AND PROCEDURE.

Practice and Procedure. Instruction in practice and procedure is preparatory and supplementary to the work of the practice court, and is conducted by text-book, lectures and special study of the statutes and decisions governing West Virginia and Federal practice and procedure. Attention is given to the jurisdiction and functions of the Supreme Court of Appeals, the Circuit, County and inferior Courts, the various Federal Courts, and the powers, duties, and liabilities of attorneys at law as officers of the court. Careful consideration is also given to the canons of professional ethics adopted by the American Bar Association and the West Virginia Bar Association. The statutes and decisions governing the purpose and use of extraordinary legal remedies, such as mandamus, habeas corpus, certiorari, quo warranto, etc., receive careful attention.

Practice Courts. There are two practice courts: first, a nisi prius court exercising original jurisdiction in law, equity, criminal, and probate cases, and, second, a supreme court of appeals to review the cases tried in the court of first instance.

Every third-year student, before receiving the bachelor's degree, is required to prepare the pleadings and prosecute to judgment the required number of cases in the nisi prius court, with the privilege of appeal to the appellate tribunal. The equivalent of at least four hours in each week during the second semester must be spent by each third-year student in participation in practice court work in the court room.

Statements of facts are furnished, such as would be related to a lawyer in active practice by his client. Each student must determine whether or not upon such facts the particular case in hand is one of common law, equity, criminal or probate cognizance. He must then frame his pleadings, serve his summons or notice, and answer his adversary's pleadings until issue is joined in legal manner, after which the case is brought on for hearing in strict accordance with the rules of actual practice. Juries are impaneled in accordance with settled legal procedure, witnesses are examined and cross-examined, and the case conducted through all the various stages of the trial or hearing down to and including the judgment, decree or sentence, after which, should the case be appealed, it must be carried through the Supreme Court, involving the preparation of the record on appeal, briefs of counsel, etc.

The clerk and his assistant are chosen from the student body, from whose ranks are also drawn the sheriff, jurors, and other officials, thus giving to the students the benefits of practice in administrative judicial machinery. The sessions are presided over by that membership of the law faculty who has charge of practice courses and by circuit judges especially chosen for the work from among the judges in the State. See page 239 for list of circuit judges who preside during the year 1916-17.

Drafting of Legal Instruments. Students are instructed in this course in the actual preparation of deeds, mortgages, wills, abstracts and opinions of title, assignments, contracts, partnership agreements, and other legal instruments which a lawyer is called upon to prepare. Statements of facts are furnished to the class by the instructor in charge and each student is required to prepare the various forms of instruments. These are corrected by the instructor and are discussed and criticized in class. Careful consideration is given to special forms of execution and acknowledgement when one of the parties is a corporation, a partnership, a married woman, or the like.

Drafting of Pleadings at Law and in Equity. This course supplements the earlier courses in the principles of common law pleading and equity pleading by giving the student practical knowledge and experience through the drafting of the pleadings themselves. Statements of facts such as a client might relate to an attorney are furnished to the student, on which he is required to draft declarations, bills, pleas, answers, replications, etc.

Special Lectures. A considerable number of lectures of great interest and value are given in the College of Law each year by judges of the Supreme Court of Appeals and by prominent members of the bar of the state.

COURSES OF INSTRUCTION.

The curriculum leading to the degree of Bachelor of Laws covers a period of three academic years. The work of the first year is prescribed. All of the studies of the second year are elective except Evidence, Real property II, and Equity jurisdiction I, and all of the third year courses except Practice and procedure and Practice Court. Second year courses may be elected by third year students, but third year courses will not in general be open to second year students. A few subjects that are given only in alternate years may be elected by both second and third year students. All required courses are marked by an asterisk.

It is expected that each student will carry fourteen hours of class room work per week during the first and second years and fifteen during the third year. Not less than thirteen nor more than sixteen hours may be carried without the special consent of the law faculty.

PROGRAM OF COURSES FOR 1917-18.

First Year.

***Agency.** (4 Hrs.) Four hours a week in the second semester. Wambaugh, Cases on Agency. Associate Professor Hardman.

***Common Law Pleading.** (4 Hrs.) Two hours a week throughout the year. Sunderland, Cases on Common Law Pleading. Assistant Professor Carlin.

***Contracts.** (6 Hrs.) Four hours a week in the first semester and two hours a week in the second semester. Williston, Cases on Contracts. Associate Professor Simonton and Professor H. C. Jones.

***Criminal Law and Procedure.** (4 Hrs.) Two hours a week throughout the year. Mikell, Cases on Criminal Law and Criminal Procedure. Professor J. R. Trotter.

***Personal Property.** (2 Hrs.) Two hours a week in the first semester. Warren, Cases on Property. Associate Professor Howard.

***Real Property I.** (2 Hrs.) Two hours a week in the second semester. Warren, Cases on Property. Associate Professor Simonton.

***Torts.** (6 Hrs.) Four hours a week in the first semester and two hours a week in the second semester. Ames and Smith, Cases on Torts. (ed. 1909-10). Professor H. C. Jones.

Second Year.

[**Damages.** (2 Hrs.) Two hours a week in the second semester. Beale, Cases on Damages, (2d. ed.). Omitted in 1917-18 and in alternate years thereafter. Professor H. C. JONES.]

Drafting of Pleadings at Law and in Equity. (2 Hrs.) One hour a week throughout the year. See page 250 for information as to the work in this course. Assistant Professor CARLIN.

***Equity Jurisdiction I.** (4 Hrs.) Two hours a week throughout the year. Ames, Cases on Equity Jurisdiction, vol. 1. Associate Professor HOWARD.

***Equity Pleading.** (2 Hrs.) Two hours a week in the second semester. Selected cases. Assistant Professor CARLIN.

***Evidence.** (5 Hrs.) Two hours a week in the first semester and three hours a week in the second semester. Thayer, Cases on Evidence, (2d. ed.). Associate Professor HARDMAN.

Insurance. (2 Hrs.) Two hours a week in the second semester. Wambaugh, Cases on Insurance. Given in 1917-18 and in alternate years thereafter. Professor H. C. JONES.

Negotiable Instruments. (3 Hrs.) Three hours a week in first semester. Smith and Moore, Cases on Bills and Notes. Associate Professor HARDMAN.

Persons and Domestic Relations. (2 Hrs.) Two hours a week in the first semester. Smith, Cases on Persons. Given in 1917-18 and in alternate years thereafter. Professor J. R. TROTTER.

***Real Property II.** (4 Hrs.) Two hours a week throughout the year. Warren, Cases on Property, and Gray, Cases on Property, vol. 3, (2d. ed.). Associate Professor SIMONTON.

Sales of Personal Property. (4 Hrs.) Two hours a week throughout the year. Williston, Cases on Sales, (2d. ed.). Professor J. R. TROTTER.

Trusts. (4 Hrs.) Two hours a week throughout the year. Ames, Cases on Trusts, (2d. ed.), and Scott, Cases on Resulting and Constructive Trusts. Associate Professor HOWARD.

Wills and Administration. (2 Hrs.) Two hours a week in the second semester. Costigan, Cases on Wills. Professor J. R. TROTTER.

Third Year.

[**Bankruptcy.** (2 Hrs.) Two hours a week in the second semester. Williston, Cases on Bankruptcy, (ed. 1915). Omitted in 1917-18 and in alternate years thereafter. Associate Professor HARDMAN.]

Conflict of Laws. (4 Hrs.) Two hours a week throughout the year. Beale, Cases on Conflict of Laws, (shorter selection). Associate Professor HOWARD.

Constitutional Law. (4 Hrs.) Two hours a week throughout the year. Wambaugh, Cases on Constitutional Law. Professor H. C. JONES.

Drafting of Legal Instruments. (1 Hr.) One hour a week in the first semester. See page 250 for information as to the work in this course. Assistant Professor CARLIN.

[**Equity Jurisdiction II.** (2 Hrs.) Two hours a week in the second semester. Ames, Cases on Equity Jurisdiction, vols. 1 and 2, (parts). Omitted in 1917-18 and in alternate years thereafter. Associate Professor HOWARD.]

Equity Jurisdiction III. (Including Quasi Contracts.) (2 Hrs.) Two hours a week in the second semester. Ames, Cases on Equity Jurisdiction, vol. 2 (part), and Woodruff's Cases on Quasi-Contracts. Given in 1917-18 and in alternate years thereafter. Associate Professor HOWARD.

Mining Law. (2 Hrs.) Two hours a week in the second semester. Selected cases. Associate Professor SIMONTON.

[**Municipal Corporations.** (2 Hrs.) Two hours a week in the first semester. Beale, Cases on Municipal Corporations. Omitted in 1917-18 and in alternate years thereafter. Associate Professor HARDMAN.]

[**Partnership.** (4 Hrs.) Two hours a week throughout the year. Gilmore, Cases on Partnership. Omitted in 1917-18 and in alternate years thereafter. Professor J. R. TROTTER.]

***Practice and Procedure.** (4 Hrs.) Four hours a week in the first semester. Munson, Elementary Practice, selected cases, statutes, and lectures. See page 249 for information as to the work in this course. Assistant Professor CARLIN.

***Practice Court.** (3 Hrs.) Court sessions and lecture periods as specified by the faculty. See page 249 for information as to the work of the practice court. Assistant Professor CARLIN and circuit judges.

Private Corporations. (4 Hrs.) Two hours a week throughout the year. Warren, Cases on Private Corporations, (ed. 1916). Professor J. R. TROTTER.

Public Speaking 14: Argumentation and Debate. (2 Hrs.) Two hours a week in the first semester. See University Catalogue, page 132, for information as to work in this course. Professor NEIL.

Public Speaking 15: Advanced Argumentation and Debate. (2 Hrs.) Two hours a week in the second semester. See University Catalogue, page 132 for information as to work in this course. Professor NEIL.

Public Utilities. (4 Hrs.)Two hours a week throughout the year. Beale, Cases on Carriers, (2d. ed.), and Wyman, Cases on Public Service Companies, (2d. ed.). Given in 1917-18 and in alternate years thereafter. Associate Professor HARDMAN.

Real Property III (Including Future Interests). (4 Hrs.) Two hours a week throughout the year. Gray, Cases on Property, vols. 5, 6 (2d. ed.). Associate Professor SIMONTON.

Suretyship. (2 Hrs.) Two hours a week in the first semester. Ames, Cases on Suretyship. Professor H. C. JONES.

THE SCHOOL OF MEDICINE

FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

JOHN NATHAN SIMPSON, M.D., *Dean and Professor of Physiology*

ALEXANDER REID WHITEHILL, PH.D., *Professor of Chemistry*

JOHN LEWIS SHELDON, PH.D., *Professor of Botany*

FRIEND E. CLARK, PH.D., *Professor of Chemistry*

AARON ARKIN, M.D., PH.D., *Professor of Pathology and Bacteriology*

WILLIAM HENRY SCHULTZ, PH.D., *Professor of Pharmacology and Materia Medica*

*CHARLES HERBERT ROGERS, PH.B., PH.C., M.S. (Pharmacy) *Associate Professor of Pharmacy*

SAMUEL JOHN MORRIS, M.D., *Assistant Professor of Anatomy and Histology*

ROBERT WALDORF FISHER, M.D., *Instructor in Physical Diagnosis*

IRVIN HARDY, M.S., M.D., *Instructor in Minor Surgery*

EDWARD MACK, PH.D., *Instructor in Chemistry*

GORDON ALGER BERGY, PH.C., M.S., *Instructor in Pharmacy*

ROBERT GEORGE BROWN, PH.C., B.S., *Instructor in Pharmacy.*

MARTIN LOXLEY BONAR, M.S., *Bacteriologist, State Hygienic Laboratory*

ALTON ALDRICH COOK, B.S., *Chemist, State Hygienic Laboratory*

ERNEST EDWARD BISHOP, *Student Assistant in Bacteriology*

INSTRUCTION IN MEDICINE.

Regular instruction in subjects preparatory to the study of medicine was first given in West Virginia University in 1878, the "chair of anatomy, physiology, and hygiene" having been established in that

*Resigned, January 31, 1917.

year. A curriculum covering the first two years of a standard four years' medical course was provided in 1902 and the work was placed in charge of the College of Medicine with a resident faculty of six men. In 1912 the College of Medicine became the School of Medicine. In reorganizing the work in medicine the Board of Regents retained the general character of the curriculum previously offered but provided for a larger faculty, more laboratories and more adequate equipment.

As at present constituted the West Virginia University School of Medicine has its own dean and faculty but confers no degrees in medicine. It it not affiliated with any other college or school of medicine and its students may go where they like to complete their medical studies and receive the degree of M.D.

The School of Medicine is a member of the American Association of Medical Colleges (Class A).

Instruction in organic chemistry, physiological chemistry, and embryology is given by members of the teaching staff of the College of Arts and Sciences. The work in physical diagnosis and in minor surgery is in charge of two practicing physicians, members of the local medical profession.

INSTRUCTION IN PHARMACY.

The following is an extract from the law of the State of West Virginia governing the practice of pharmacy:

Sec. 11. In order to be hereafter licensed as a pharmacist within the meaning of this act, an applicant shall be not less than twenty-one years of age, and shall present to the board of pharmacy satisfactory evidence that he has had four years' experience in pharmacy under the instructions of a licensed pharmacist, and he shall pass a satisfactory examination by or under the direction of the board of pharmacy; in order to be licensed as an assistant pharmacist, within the meaning of this act, an applicant shall be not less than eighteen years of age, shall have a sufficient preliminary general education, and shall have not less than two years experience in pharmacy under the instruction of a licensed pharmacist and shall pass a satisfactory examination by or under the direction of the board of pharmacy; provided, however, that in the case of a person who has attended a reputable school or college of pharmacy, the actual time of attending such school or college of pharmacy may be deducted from the time of experience required of pharmacists, but in no case shall less than two years' experience be required for graduation as a licensed pharmacist.

A Department of Pharmacy is established in the School of Medicine and a two-year course in pharmacy leading to the Degree of

Graduate in Pharmacy (Ph.G.); a three-year course leading to the degree of Pharmaceutical Chemist (Ph.C.), and a four-year course leading to the degree of Bachelor of Science in Pharmacy (B.S. Pharmacy) are offered.

A certificate of graduation from the Department of Pharmacy, West Virginia University, will be recognized by such state boards of Pharmacy as require a course in pharmacy preliminary to examination for registration.

The West Virginia State Board of Pharmacy does not require a college course of applicants presenting themselves for examination, but it strongly recommends the same to all persons intending to become candidates for registration.

THE MEDICAL BUILDING.

A three story brick building furnishes room for the classes in medicine, the Department of Pharmacy and the Hygiene Laboratories of the State Department of Health.

On the first floor are found the offices of the dean, the physiological and pharmacological laboratories, the medical and pharmaceutical dispensaries, and the medical library. On the second floor are the laboratories of bacteriology and pathology, the chemical and bacteriological laboratories of the Department of Health, and a large physiological laboratory. The third floor has a very large laboratory for gross anatomy, one for histology, and one for pharmacy. Each laboratory is provided with an abundance of light. In the basement are found rooms for the preparation and storage of cadavers and an animal room where the experimental animals are kept. There is an incineratory plant for the disposal of refuse.

MEDICAL DISPENSARY.

A dispensary open to the city poor is conducted by the physicians of the medical faculty. Free service is rendered. The treating of patients is done by the faculty but students of the second year class are instructed in the proper methods of examining and diagnosing disease. This work supplements the courses in physical diagnosis and minor surgery.

In return for the medical fee paid by all male students free service is rendered to students by the faculty and drugs supplied free from the pharmaceutical dispensary.

HYGIENIC LABORATORY—STATE DEPARTMENT OF HEALTH.

The hygienic laboratory of the State Department of Health is maintained in connection with the School of Medicine. Its function is to deal with all problems which affect the health of the public generally such as water analysis, both bacteriological and chemical; analysis of milk, excreta, sputum for tuberculocis, throat swabs for diptheria; pathological examination of diseased tissue for rabies and for cancer and other tumors; examination of blood for typhoid; etc. The use of the hygienic laboratory for milk and water analysis and for diphtheria examination is open to the public through county or city health officers, but for the examination of sputum and typhoid any physician may send specimens.

All communications relative to the laboratory should be addressed to the director of the laboratory, J. N. Simpson, M.D., Morgantown, W. Va., or to the Commissioner of Health, S. L. Jepson, M.D., Charleston, W. Va.

LABORATORIES OF THE SCHOOL OF MEDICINE.

ANATOMICAL LABORATORY.

The anatomical laboratory is equipped with a Bausch & Lomb Balopticon for doing projective work, a complete set of imported models of the brain and nervous system, eye, ear, thoracic and abdominal viscera, joints and muscles. There are frozen sections of the body for use in the study of regional anatomy. Each student in gross anatomy has the use of a complete skeleton and each student in histology is provided with a microscope.

PATHOLOGICAL LABORATORY.

The pathological laboratory is equipped with all necessary apparatus for general and special work, including paraffine and celloidin microtomes, freezing microtomes, paraffine ovens, Leitz microscopes with oil immersion lenses, all necessary stains and chemicals. There is also a projection apparatus with microscope attachment for demonstration purposes. The department possesses a large collection of mounted microscopic sections representing all the pathological processes and a museum of gross specimens. The apparatus of the hygienic laboratory as well as the material sent to it is placed at the disposal of the department. Surgical material is obtained from the city hospital.

LABORATORY OF MEDICAL BACTERIOLOGY.

The bacteriological laboratory is equipped with all necessary apparatus, such as sterilizers, incubators, glassware, etc. Each student has the use of a Leitz microscope with oil immersion lens. Special apparatus for bacteriological examination of air, water, milk, blood, etc., is supplied to each student. The State Board of Health work in the hygienic laboratory furnishes material for laboratory work in bacteriological diagnosis, such as Widal tests for typhoid, examination of sputum for tubercle baccilli, bacteriological examination of water, etc.

PHYSIOLOGICAL LABORATORY.

The laboratory devoted to the work in physiology is supplied with tables, each accommodating two students who work together. Each table has a complete set of Harvard physiological apparatus which is lent to the student with a charge for breakage only. There are for general use kymographs, apparatus for work in blood pressure, and blood counting, hemaglobinometers, charts and models.

PHARMACEUTICAL LABORATORIES.

Each of the two pharmaceutical laboratories will accommodate sixteen students. Microscopy, pharmacognosy, pharmaceutical testing and assay will be carried on in one of the laboratories while work in manufacturing pharmacy will be provided for in the other. The desks are equipped with gas, running water and drainage. All material and equipment necessary for thorough courses in these branches is at hand.

PHARMACOLOGICAL LABORATORY.

The pharmacological laboratory is equipped with chemical desks, operating tables, and electrical kymograph and respiration apparatus for taking continuous records of respiration and blood pressure. Special animal cages are provided to meet the needs of courses 41 to 47 inclusive. In addition, a special animal house for the proper care of experimental material is provided. Aside from the general equipment of the laboratory, each set of two students is provided with individual sets of apparatus and reagents. The laboratory is also provided with a collection of crude drugs, alkaloids, glucosides, and analytical chemicals.

The chemical, botanical and zoological laboratories of the University are also open to students in the School of Medicine.

LIBRARY AND READING ROOM.

The medical library consists of over 3200 bound volumes and many unbound journals and reprints. There is a good collection of works on chemistry, anatomy, physiology, pharmacy, zoology, botany, pathology, bacteriology, pharmacology, medicine, and surgery. There are bound volumes of the leading scientific journals as well as some of the leading German, French and American journals devoted to the laboratory side of medicine. The general library is in close proximity to the medical laboratories and is open all day and till ten o'clock at night.

MEDICAL LABORATORY FEES.

Students in laboratory courses pay special fees to cover the cost of materials used. These fees in the courses required of medical students are as follows:

Gross anatomy 13 and 14	$10.00
Histology 12	2.00
Bacteriology 3	3.00
Pathology 22	3.00
Chemistry 9 and 10	20.00
Chemistry 18	10.00
Embryology 6	3.00
Pharmacology 40	2.00
Physiology 4	2.00
Total for two year course	$55.00

PHARMACY LABORATORY FEES.

Pharmacy 2	$ 3.00
Pharmacy 4	5.00
Pharmacy 6	5.00
Pharmacy 9	3.00
Chemistry 1	3.00
Chemistry 2	3.00
Chemistry 17	8.00
Chemistry 32	3.00
Microscopy	1.00
Pharmacy 41	2.00
Total for two year course	$36.00

ADMISSION TO THE SCHOOL OF MEDICINE.

For admission either to the medical course or to the pharmacy course in the School of Medicine the student must have credit for fifteen units of secondary school work, i. e., the work of a standard four-year high school.

For admission to the course in medicine (see page 263) he must in addition, have credit for sixty-four hours work done either in the College of Arts and Sciences of West Virginia University or in another institution of equal grade.

Secondary School Credits.

Of the fifteen units of secondary work required nine are definitely prescribed as follows:

	Units
English	3
Latin	2
History	1
Mathematics: algebra, 1 unit; plane geometry, 1 unit; Total	2
Science: physics, chemistry, botany, or zoology; Any one of the four	1
Total prescribed	9

The remaining six units must be chosen as electives from the following list:

	Units
Latin	1 to 2
Greek	1 to 3
German	1 to 3
French	1 to 3
Mathematics: Algebra, ½ unit; Solid geometry, ½ unit; Plane trigonometry, ½ unit	½ to 1½
History and civics	½ to 2
Physics	1
Chemistry	1
Botany	½ to 1
Zoology	½ to 1
Physical geography	½
Physiology	½
Drawing	½ to 1
Vocational studies	1 to 2

College Credits.

The sixty-four hours of college work required for admission are indicated in the schedule on page 263.

The American Medical Association and The Association of American Medical Colleges requires a minimum of eight hours each of college work in zoology, chemistry, and physics. At least half of the work in zoology and chemistry and at least two hours of the work in physics must be done in the laboratory. Not less than six hours work in a foreign language preferably French or German must be taken in addition to any work offered for entrance to the School of Medicine.

NOTE.—No student can be admitted with condition in either preparatory or college subjects.

Admission of Special Students in Pharmacy.

Persons over nineteen years of age who bring evidence of having completed a grammar school education and two years in an approved high school, and of practice in pharmacy for at least two years, will be admitted as special students to the two-year course in pharmacy.

NOTE.—By a resolution of the State Board of Health all applicants for license to practice medicine in West Virginia are required to file with the secretary of the Board their certificate of high school graduation or its equivalent. The secretary will investigate doubtful cases, asking the aid when necessary of the University committee on classification and grades.

COURSES IN THE SCHOOL OF MEDICINE.

THE COURSE IN MEDICINE.

A student who desires to prepare himself for the practice of medicine and who has satisfied the requirements for entrance to the freshman class of the College of Arts and Sciences may matriculate in the College of Arts and Sciences and announce his intention of taking the combined scientific and medical course. After completing sixty-four hours (two years) of work in this college he may enter upon the two years course of the School of Medicine. On the completion of the course of this scool he will receive the degree of Bachelor of Science. He may then enter a standard medical college, complete its course and receive the degree of Doctor of Medicine. His college and medical course together will in this case usually occupy six years.

The courses required in the College of Arts and Sciences and in the School of Medicine are indicated in the following schedule:

SCHEDULE FOR THE COMBINED B.S. AND M.D. COURSE.

Courses in the College of Arts and Sciences.

First Year—First Semester.			First Year—Second Semester.		
English 1	3		English 2	3	
English 26	2		English 27	2	
Chemistry 1	4		Chemistry 2	4	
Zoology 1	4		Zoology 2	4	
German 19 or French 3	3		German 22 or French 5	3	
Military science	1	17	Military science	1	17
Second Year—First Semester.			**Second Year—Second Semester.**		
Physics 1	3		Physics 3	3	
Physics 2	1		Physics 4	1	
Botany 3	4		Philosophy 14	3	
Chemistry 9	5		Chemistry 18	5	
Elective	2		Elective	3	
Military science	1	16	Military science	1	16

Courses in the School of Medicine.

Third Year—First Semester.

Histology 12	8:00 M. W. F.; lab., 9:00-12:00 M. F.	5	
Chemistry 10	11:00 T. W. Th.; lab., 8:00-11:00 T. Th.	5	
Anatomy 13	2:00-5:00 daily	7	
Military science		1	18

Third Year—Second Semester.

Bacteriology 3	2:00 T. Th., 8:00 S.; lab. 8:00-10:00 daily (first twelve weeks)	5	
Neurology 15	8:00-10:00 daily, 2:00 T. Th. (last six weeks)	2	
Embryology 6	10:00-12:00 M. T. Th. F.	3	
Anatomy 14	3:00-5:30 M. W. F., 9:00-12:00 S.	3	
Physiology 2	2:00 M. W. F.	3	
Physiology 4	2:00-5:30 T. Th. (first half)	1	
Pharmacology 40	2:00-5:30 T. Th. (second half)	1	
Military science		1	19

Fourth Year—First Semester.

Pathology 21	8:00 M. W. F.; lab., 2:00-5:00 M. W. F.	6	
Pharmacology 42	8:00 T. Th. S.	3	
Physiology 3	9:00 daily	5	
Physical diagnosis 31	10:00 M. Th. F.	3	
Physiology 5	2:00-5:30 T. Th	1	
Military science		1	19

Fourth Year—Second Semester.

Pharmacology 43	8:00 M. W. F.	3	
Hygiene 5	8:00 T. Th.	2	
Minor surgery 51	9:00 M. W. F.	3	
Pathology 22	11:00 W.; lab., 10:00-12:00 T. Th.	3	
Anatomy 17	2:00-5:00 T. Th.	2	
Operative surgery 52	9:00 S.	1	
Pharmacology 41	2:00-5:30 M. F.	2	
Military science		1	17

Fifth and Sixth Years.

To be taken at an approved School or College of Medicine.

NOTE.—Medical students must take their work in sequence as shown in the schedule. If they fail in a course they may go on in the following year but the course must be taken again at the first opportunity.

COURSES IN PHARMACY.

The School of Medicine offers three courses in pharmacy:

(a) A two years course (four semesters of eighteen weeks each) leading to the Professional Degree of Graduate in Pharmacy (Ph.G.). The specific curriculum required for this certificate is stated below.

(b) A three years course leading to the Professional Degree of Pharmaceutical Chemist (Ph.C.).

(c) A four year combined academic and professional course leading to the degree of Bachelor of Science in Pharmacy (B.Sc. Pharm.).

CURRICULUM IN TWO-YEAR COURSE IN PHARMACY.

First Year—First Semester.

Pharmacy 1	9:00 M. T. W. Th. F.	5	
Pharmacy 2	2:00-5:00 M. Th.	3	
Physiology 6	10:00 M. T. Th. F.; 2:00 W.	5	
Chemistry 1	11:00 M. W. F.; 2:00 T.	4	17

First Year—Second Semester.

Botany 4	8:00 T. Th.; 9:00-12:00 T. Th.	4	
Pharmacy 3	10:00 M. F.; 8:00 W.	3	
Pharmacy 4	2:00-5:00 W. F.	3	
Pharmaceutical chemistry 32	8:00 T. Th.; 2:00-5:00 Th.	3	
Chemistry 2	11:00 M. W. F.; 2:00-5:00 M.	4	17

Second Year—First Semester.

Pharmacognosy and Materia medica 11	9:00 M. T. W. Th. F.	5	
Microscopy 10	10:00-12:00 T. Th.	2	
Pharmacy 5	11:00 M. W. F.	3	
Pharmacy 6	2:00-5:00 T. Th.	3	
Chemistry 34	10:00 M. F.; 8:00 W.	3	
Chemistry 17	2:00-5:00 M. W. F.	4	20

Second Year—Second Semester.

Pharmacy 7	9:00-12:00 T. Th.	3	
Pharmacy 8	9:00 M. W. F.	3	
Pharmacy 9	2:00-5:00 W. F.	3	
Pharmacology 42	8:00 W. F. S.	3	
Pharmacology 41	2:00-5:00 M. F.	2	
First aid 17	10:00 M. F.	1	
Chemistry 36	11:00 M. W. F.	3	18

In the foregoing curriculum the foundation in pharmacy and phamacognosy is provided together with the essentials of analytical

chemistry as applied in the drug business and required for various manufacturing purposes. All subjects scheduled for this course are compulsory. The laboratory method of instruction is given special attention. The number of hours spent in this course is 1882, of which 1090 are spent in the laboratory and the remaining 792 in lecture and quiz work.

A special student who completes the two-year course will receive a certificate showing that the student has pursued studies in pharmacy successfully for two years. These students may later become candidates for the degree of Bachelor of Science in Pharmacy by completing the full entrance requirements.

THE THREE AND FOUR YEAR COURSES.

The three year course is designed particularly for those who desire to enter the commercial field of pharmaceutical chemistry and food and drug chemistry or for those pharmacists who wish to strengthen their professional relations by the practice of urinary, bacteriological, and toxicological analysis for the physician. Students are advised to select one phase of the advanced work and pursue it to completion as outlined since there would not be sufficient time in three years to permit of the successful accomplishment of both. The three year course includes a foreign language, rhetoric, and science as well as advanced studies in pharmacy, microscopy, etc., not offered in the two year course.

The four year course is a combined academic and professional course. Mathematics, language and science as well as the entire pharmaceutical work of the two year course are included.

COURSES OF INSTRUCTION.

ANATOMY.

Assistant Professor S. J. MORRIS.

A study of osteology and articulations is carried on in connection with the dissection of cadaver. The cadaver is divided into three parts for the purpose of dissection; the head, including the thoracic viscera, the arm, and the leg including the abdominal and pelvic viscera. The work in gross anatomy is largely practical and is given almost entirely in the dissection room. Practical quizzes upon parts dissected are held at short intervals.

13. Dissection. (7 Hrs.) Required of all first year medical students. A careful dissection of muscles, nerves, bloodvessels, and different organs of the body in situ. Lectures and recitations (75 hours) and laboratory (210 hours). Laboratory fee, $5.00.

First semester; 2:00-5:00.

14. Dissection. (3 Hrs.) Required of all first year medical students. A continuation of course 13. Laboratory fee, $5.00.

Second semester; M. W. F., 3:00-5:00; S., 9:00-12:00.

12. Histology. (5 Hrs.) Required of first year medical students and prerequisite for courses in pathology. The work includes the study of cells, tissues, and organs, with the instruction in the ordinary methods of preparing tissues for microscopic examination. The lectures are supplemented by the use of the projection apparatus. Lectures and quizzes. Laboratory fee, $2.00.

First semester; M. W. F., 8:00; laboratory, M. F., 9:00-12:00.

15. Neurology. (2 Hrs.) Required of all first year medical students. A gross and microscopic study of the central nervous system.

Second semester (last six weeks); T. Th., 2:00; laboratory, M. T. W. Th. F., 8:00-10:00.

17. Applied Anatomy. (2 Hrs.) Required of all second year medical students. Topographical and applied anatomy of the entire body, including the cavities and viscera. Lectures, quizzes and demonstrations by use of models, special dissections and cross sections.

Second semester; T. Th., 2:00-5:00.

6. Vertebrate Embryology. (3 Hrs.) Required of second year medical students. Cleavage, gastrulation and the formation of the germ layers are studied in the frog and chick; the development of organs in the chick and pig. The materials are supplied by sections, dissections, and cleared preparations of human embryos. Prerequisite: Zoology 2.

Second semester; M. T. Th., 10:00; F., 11:00; 50 W.

BACTERIOLOGY AND PATHOLOGY.

Professor ARKIN.

The following courses are required of all medical students: Bacteriology 3, 5 hrs.; Bacteriology 5 (Hygiene and Sanitation), 2 hrs.; Pathology 21, 6 hrs.; Pathology 22, 3 hrs.

3. Medical Bacteriology. (5 Hrs.) Preparation of culture media, and study of pathogenic bacteria and their relation to disease; their hygienic as well as pathologic relations. Bacteriologic examination of air, water, milk, foods, sputum, blood, etc. Isolation of bacteria from unknowns. Laboratory fee, $3.00.

Second semester, (first twelve weeks); lectures, (40 hrs.) T., Th., 2:00; S., 8:00; laboratory, (120 hrs.) M. T. W. Th. F., 8:00-10:00.

4. Advanced Bacteriology. (2 Hrs.) Open to fourth year and graduate students. Advanced bacteriologic technique; methods employed in the conduct of modern research problems in bacteriology; special culture media, anaerobic cultivation, staining methods, etc.

Hours to be arranged.

5. Hygiene and Sanitation. (2 Hrs.) The principles of hygiene and sanitation as they pertain to the welfare of the individual, and the care of the public health; prevention of communicable diseases; heredity; eugenics; immunity; food, air and water as sources of disease; personal hygiene; school hygiene; occupational diseases; vital statistics.

Second semester; lectures (36 hrs.), T. Th., 8:00.

6. Research in Bacteriology. (1 or 2 Hrs. according to work done.) Open to limited number of graduate students in medicine.

7. State and Municipal Laboratory Methods. (2 Hrs.) Open to fourth year and graduate students. The diagnosis of typhoid, diptheria, tuberculosis, syphilis, gonorrhoea, rabies, etc., and bacteriologic examination of water, milk, food, etc. Prerequisite: Bacteriology 3 or its equivalent.

Hours to be arranged.

8. Immunity. (2 Hrs.) Open to seniors and graduate students. A study of immunity with laboratory work on animals; cytolysis, agglutination; toxins; precipitins; phagocytosis; anaphylaxis; complement fixation; and their applications to diagnosis and treatment. Prerequisite: Bacteriology 3 and Pathology 21.

Hours to be arranged.

11. Laboratory Diagnosis. (2 Hrs.) A laboratory course in chemical, microscopic and bacteriologic examination of urine, feces, blood, gastric contents, etc., and their pathologic and clinical significance. Prerequisite: Bacteriology 3, and Physiological chemistry 10.

Hours to be arranged.

21. General Pathology. (6 Hrs.) Open to seniors and graduate students. The technique of tissue preparation, staining and mounting; disturbances of circulation and nutrition; inflamations; degenerations; infiltrations; necrosis; infectious granulomas and tumors. Lectures, demonstrations, and laboratory work. Laboratory fee, $3.00. Prerequisites: Physiological chemistry; histology, physiology, and anatomy.

First semester; lectures (54 hrs.), M. W. F., 8:00; laboratory (162 hrs.) M. W. F., 2:00-5:00.

22. Pathology of Infectious Granulomas and Tumors. (3 Hrs.) Open to seniors and graduate students. Continuation of Pathology 21. Tuberculosis, syphilis, actinomycosis, blastomycosis, etc., and the benign and malignant tumors. A study of the pathology of special organs is made. Lectures, recitations, and laboratory work. Laboratory fee, $3.00. Prerequisite: Pathology 21.

Second semester; lectures (18 hrs.), W., 11:00; laboratory (72 hrs.), T. Th., 10:00-12:00.

23. Advanced Pathology. (3 Hrs.) This course is open to a limited number of students who have credit for Pathology 21. Special technique, autopsy work, pathological physiology.

Both semesters; hours to be arranged.

24. Research in Pathology. (Credit according to work done, not to exceed three hours.) Open only to graduates.

CHEMISTRY.

Professor WHITEHILL. Professor CLARK, and Staff.

1. Inorganic Chemistry. (4 Hrs.) Required of freshmen preparing to enter the School of Medicine. For detailed announcements see page 75. Laboratory fee, $3.00.

First semester; Professor WHITEHILL and staff.

2. Inorganic Chemistry. (4 Hrs.) Continuation of course 1. Laboratory fee, $3.00.

Second semester; Professor WHITEHILL and staff.

9. Organic Chemistry. (5 Hrs.) Required of sophomores preparing to enter the School of Medicine. Prerequisite: Chemistry 1, 2, and 3. Laboratory fee, $8.00.

First semester; 10:00-12:00; Professor CLARK, 23 S.

18. Qualitative and Quantitative Analysis. (5 Hrs.) Required of sophomores preparing to enter the School of Medicine. Laboratory fee, $10.00.

Second semester; daily, 2:00-5:00; Professor CLARK, 23 S.

10. Physiological Chemistry. (5 Hrs.) Required of first year medical students. Continuation of Chemistry 9. Laboratory fee, $10.00.

First semester; 10:00-12:00; Mr. MACK, 23 S.

NOTE.—In 1917 Chemistry 10 will be given in the second semester instead of in the first.

PHARMACOLOGY.

Professor SCHULTZ.

40. Pharmacology. (2 Hrs.) This course or an equivalent is a prerequisite to all other required courses in pharmacology. Chemical tests and chemico-physical data prepare the student for the more technical information relating to incompatibility of drugs, their obsorption, excretion, and fate in the tissues.

Second semester; last nine weeks, T. Th., 3:00-5:30.

42. Systematic Pharmacology. (3 Hrs.) Required of second year medical students. Continuation of course 40. The subject matter

covered is that outlined in Cushny's textbook, along with a consideration of some of the newer and non-official remedies. Class drills and home practice are introduced at intervals; hypothetical conditions are discussed; and each student writes out his own prescriptions, giving reasons therefor. Certain of these prescriptions are compounded and the possible pharmacodynamic action is discussed in conferences. Prerequisite: Physiology 2 and 4.

First semester; T. Th. S., 8:00.

41. Pharmacodynamics. (2 Hrs.) Required of second year medical students. Simple experiments upon cold-blooded animals; more complex experiments with the lower mammals; operative work upon cats and dogs. Considerable emphasis is laid upon technique and a careful analysis of experimental results. Accurate notes are required and each student is required in the conference to give reasons for conclusions deducted from his experimental data. Laboratory fee, $2.00.

Second semester; M. F., 2:00-5:30.

43. Systematic Pharmacology. (3 Hrs.) Continuation of course 42. Required of second year medical students.

Second semester; M. W. F., 8:00.

45. Special Pharmacodynamics. (Credit according to work done.) Open to advanced students and special workers who desire training in biological assay. Courses 45 and 46 are especially recommended to advanced students intending to enter the Public Health Service or the government laboratories, where a knowledge of this class of work is essential.

Hours to be arranged; 8 W.

46. Toxicology. (2 Hrs.) A course in which the toxic action of drugs is considered from a medico-legal point of view. Practical methods of diagnosing poisoning and the mode of conducting autopsies when the tissues are to be turned over to an analyst will be demonstrated. In the laboratory, special attention is given to the chief tests for the identification of the principal alkaloids, gluosides, metallic and volatile poisons.

First semester; hours to be arranged; 8 W.

47. Chemo-Therapy. A research course open only to advanced students who have a knowledge of organic chemistry and who can read German.

Hours to be arranged.

48. Research in Pharmacology. Open to those who have special qualifications for advanced work.

Hours to be arranged.

PHYSIOLOGY.

Professor SIMPSON.

6. Physiology. (5 Hrs.) Open only to pharmacy students. A study of the functions of the different organs of the body, illustrated by demonstrations of human organs and those of lower animals, with a microscopic study of the most important tissues. A study of the dissected human body is made in the anatomical laboratory. One afternoon a week is given to laboratory work. Laboratory fee, $1.00.

First semester; M. T. Th. F., 10:00; W., 2:00-5:00.

1. Physiology. (5 Hrs.) Intended for college students who do not care to go into the details of medical physiology. Similar to course 6, but a more advanced text is used. This course will meet the needs of teachers of public schools. Prerequisite: either physics or general chemistry. Laboratory fee, $1.00.

Second semester; M. T. Th. F., 11:00; M., 2:00-5:00.

2. Physiology. (3 Hrs.) Required of first year medical students. A study of the blood, the organs of circulation, vasomotor nerves, respiration, digestion, internal secretion, nutrition, heat production, and reproduction. Prerequisite: Histology 12.

Second semester; M. W. F., 2:00.

3. Physiology. (5 Hrs.) A study of muscle, nerve, the central nervous system, and the special senses. Prerequisite: Physiology 2 and Neurology 5.

First semester; M. T. W. Th. F., 9:00.

4. Physiology. (1 Hr.) Introductory laboratory course accompanying course 2. Required of all first year students in the School of Medicine and prerequisite for Pharmacology 40. Laboratory fee, $2.00.

Second semester; first nine weeks, T. Th., 2:00-5:00.

5. Physiology. (1 Hr.) Required of second year medical students. This laboratory course supplements coruse 4, and completes 2 and 3. Each student makes complete records of each experiment. These are written up and the note books handed in at the end of the semester. The work covers blood pressure experiments on mammals, heart control, respiration, digestion, nerve, muscle preparations and the special senses. Fee, $2.00.

First semester; T. Th., 2:00-5:00.

PHYSICAL DIAGNOSIS.

Dr. FISHER.

31. Physical Diagnosis. (2 Hrs.) Required of second year medical students. An introductory course in the study of the taking of medical histories, inspection, palpation, percussion, and auscultation of patients in health and disease.

First semester; M. W. F., 10:00.

MINOR SURGERY.

Dr. HARDY.

51. Minor Surgery and Operative Technique. (3 Hrs.) Required of second year medical students. Open to graduate students. Instruction by demonstrations and practice in the various manipulations of minor surgery, including the application of splints and bandages. Lectures and practical work in the principles of asepsis, antisepsis, and sterilization; preparation of patient and operator; dressing and care of wounds. Practical instruction of individual students in the induction of general and local anesthesia.

Second semester; M. W. F., 9:00; City Hospital.

COURSES IN DEPARTMENT OF PHARMACY.

PHARMACY.

Mr. BERGY and Mr. BROWN.

1. Metrology and Pharmaceutical Mathematics. (5 Hrs.) This course provides the necessary foundation for all subsequent work in pharmacy.

First semester; M. T. W. Th. F., 9:00; Mr. BERGY.

2. Physics of Pharmacy. (3 Hrs.) A laboratory course in such branches of physics as apply to pharmaceutical processes.

First semester; M. Th., 2:00-5:00; Mr. BERGY.

3. Operative Pharmacy Lectures. (3 Hrs.) A systematic consideration of the various official preparations for which the Pharmacopoeia gives formulas and processes.

Second semester; M. F., 10:00; W., 8:00; Mr. BERGY.

4. Operative Pharmacy Laboratory. (3 Hrs.) This course is carried on in conjunction with Pharmacy 3. Representative preparations of the various classes of pharmacopoeials are manufactured. Instruction is given in the identification of these preparations by their physical characteristics. Laboratory fee, $5.00.

Second semester; W. F., 2:00-5:00; Mr. BERGY and Mr. BROWN.

5. Manufacturing Pharmacy Lectures. (3 Hrs.) This course of demonstrative lectures has for its subject mater the work outlined in Pharmacy 6. A general discussion of the prescription is taken up.

First semester; M. W. F., 11:00; Mr. BERGY.

6. Manufacturing Pharmacy Laboratory. (3 Hrs.) Practice in making preparations and in acquiring the necessary technique. The individual preparations are always assigned in the form of a prescription. National Formulary as well as U. S. Pharmacopoeial preparations are considered. Laboratory fee, $3.00.

First semester; T. Th., 2:00-5:00; Mr. BERGY and Mr. BROWN.

7. Dispensing. (3 Hrs.) In accordance with the plans of the University Free Dispensary, physicians' prescriptions are compounded and dispensed under the direct supervision of a registered pharmacist. The number of prescriptions filled for the Free Dispensary averages between three and four hundred a semester.

Second semester; T. Th., 9:00-12:00; Mr. BERGY and Mr. BROWN.

8. Prescriptions and Incompatibilities. (3 Hrs.) Prescriptions are considered in detail. Therapeutic, pharmaceutical and chemical incompatibility are taken up in lecture and recitation work. Preliminary to Pharmacy 7.

Second semester; M. W. F., 9:00; Mr. Brown.

9. Assay and Pharmacopoeial Testing. (3 Hrs.) A critical study of the identity, purity, limit and percentage tests of the U. S. Pharmacopoeia as applied to all official organic and inorganic compounds. Laboratory fee, $1.00.

Second semester; T. Th., 2:00-5:00; Mr. Brown.

CHEMISTRY.

1. Inorganic Chemistry. (4 Hrs.) See Department of Chemistry, College of Arts and Sciences, page 75.

Fist semester; M. W. F., 11:00; T., 2:00-5:00; Professor Whitehill, 20 S.

2. Inorganic Chemistry. (4 Hrs.) See Department of Chemistry, College of Arts and Sciences, page 75.

Second semester; M. W. F., 11:00; M., 2:00-5:00; Professor Whitehill, 20 S.

17. Qualitative and Quantitative Analysis. (4 Hrs.) A course treating of the elementary principles of qualitative analysis. Laboratory fee, $4.00.

First semester; M. W. F., 2:00-5:00; Professor Clark, 23 S.

32. Pharmaceutical Chemistry. (3 Hrs.) A course dealing specifically with inorganic chemistry as applied to pharmacy. Laboratory fee, $2.00.

Second semester; T. Th., 8:00; laboratory, Th., 2:00-5:00; Mr. Bergy.

34. Organic Chemistry. (5 Hrs.) An elementary lecture and recitation course in which the classification, class reactions, syntheses and properties of entire classes are considered. Especially adapted for students in pharmacy.

First semester; M. W. F., 10:00; Professor Clark.

36. Organic Chemistry. (3 Hrs.) Prerequisite: Organic chemistry 34.

Second semester; M. W. F., 11:00; Mr. Bergy.

OTHER COURSES.

3. Botany. (4 Hrs.) See page 73 for detailed description of this course.

First semester; T. Th., 8:00; laboratory, T. Th., 9:00-12:00; Mr. SHUNK.

4. Botany. (4 Hrs.) See page 73 for detailed description of this course.

Second semester; T. Th., 8:00; laboratory, T. Th., 9:00-12:00; Mr. SHUNK.

10. Microscopy. (2 Hrs.) A detailed study of the microscope and accessories and their uses in the arts, sciences and industries; of starches, powdered vegetable drugs, microscopical characteristics, adulterants of powdered drugs and spices. Laboratory fee, $1.00.

First semester; T. Th., 10:00-12:00; Mr. BROWN.

11. Study of Crude Drugs. (5 Hrs.) Lectures and recitations including official titles and definitions, families, constituents, actions, uses and doses, together with practical work in identification. Animal drugs and their materia medica are considered here. In conclusion a short series of lectures on immunity, antitoxins, vaccines, etc., especially fitted for the students in pharmacy.

First semester; M. T. W. Th. F., 9:00; Mr. BROWN.

42. Systematic Pharmacology. (3 Hrs.) Especially designed for students in pharmacy.

First semester; T. Th. S., 8:00; Professor SCHULTZ.

41. Pharmacodynamics. (2 Hrs.) Especially designed for students in pharmacy.

Second semester; M. F., 2:00-5:00; Professor SCHULTZ.

6. Physiology. (5 Hrs.)

First semester; M. T. Th. F., 10:00; laboratory, W., 3:00-5:00; Dean SIMPSON.

17. First Aid to the Injured. (1 Hr.) A demonstrative lecture course in bandaging, care of the wounded, antidotes for poisons, etc.

Second semester; M. F., 10:00; Dean SIMPSON.

THE SCHOOL OF MUSIC

STAFF OF INSTRUCTION.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

LOUIS BLACK, *Director and Head of the Vocal Department*

FREDERIC CURTIS BUTTERFIELD, A.B., *Head of the Piano Department*

SUSAN MAXWELL MOORE, A.B., *Instructor in Piano*

GRACE MARTIN SNEE, B.M., *Instructor in Piano and Pipe Organ*

MARGARET WINTON HORNE, *Instructor in Violin and Ensemble*

FLORA RAY HAYES, A.B., *Instructor in Theory and History of Music*

HERMINE WIECKING, *Instrutcor in Public School Music*

WALTER A. MESTREZAT, *Instructor in Wind Instruments*

GENEVIEVE ELLIOTT MARSHALL, *Assistant in Voice*

BUILDING AND EQUIPMENT.

The school occupies the upper floor of Woodburn Hall, which contains well appointed studios and practice rooms. A recital hall, seating 400 people, has been provided for lectures and students' recitals.

Commencement Hall, seating 1,000 people, contains a magnificent three-manual pipe organ, tubular pneumatic—built upon the universal wind-chest system and having 76 stops and mechanical accessories. A new Moller console and stop action has recently been added. This organ, which receives power from an electric motor, is available for practice.

The school is equipped exclusively with Knabe pianos; in all ten uprights and six concert grands.

CONCERTS AND RECITALS.

FACULTY CONCERTS.

Faculty concerts are given at least three times a year, the last of the yearly series being the Commencement concert. All the members of the School of Music Faculty participate in these concerts, though occasionally one member may give an individual recital.

STUDENT CONCERTS.

A students' concert is given each week. These concerts vary in grade from elementary to graduate and post-graduate recitals. The object is to afford opportunity for the students to apply in public the proficiency that has been developed in the studio.

ARTISTS' CONCERTS.

During each year several artists of international fame are engaged for recital and concerts; such artists as Rosenthal, Harold Bauer, Tina Lerner, Francis McMillan, Schumann-Heink, Frances Alda, David Bispham and others.

These concerts are made easily accessible to students generally.

THE CHORAL SOCIETY.

The students of the University who can sing are admitted to the choral society upon payment of fifty cents, the membership fee. For those who are not students the fee is $1.00.

Students, generally, are urged to ally themselves with the society on account of its educational value; to vocal students this work is especially valuable for it is the custom to have all the solo work done, as far as possible, by members of the society. The opportunity to sing roles in The Messiah and Elijah with orchestra is a most valuable experience.

GENERAL ANNOUNCEMENTS.

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the semester.

Students entering within the first two weeks of a semester will be charged for full semester; after that time, for the remainder of the semester and one week additional.

There is no deduction made for lessons missed by students except in case of prolonged illness, when the loss is divided equally between the student and the school.

Students of the School of Music are not allowed to take part in public programs or to join musical organizations without the consent of their respective teachers and the director of the school.

All music students are expected to attend the regular students' recitals, and to take part in them whenever so assigned, and to attend all concerts given under auspices of the University. They are expected to identify themselves with the various organizations of the school, and are required to enter any of which they are assigned by the director.

It is expected that all students will take sufficient work—literary or musical or both—to occupy their entire time.

CREDIT FOR MUSIC ON COLLEGE COURSES.

Credit towards the degree of Bachelor of Arts will be given for courses in the theory and the history of music, not to exceed fifteen semester hours.

COURSES OF STUDY.

The School of Music offers instruction in the following subjects: voice, piano, violin, organ, accompanying, chamber music, orchestra, band music, sight-reading, public school music, harmony, counterpoint, canon and fugue and history of music. In voice, piano, and violin two courses are offered, one of three years, leading to a teacher's certificate, and one of four years, leading to an artist's diploma.

REQUIREMENTS FOR ADMISSION.

No student can be classified in the collegiate course in music without passing an examination in solfeggio, or demonstrating to the satisfaction of the head of the department the ability to read music of moderate difficulty, and giving evidence of the mastery of the elements of music.

In the preparatory course, to which children only are admitted, no previous knowledge of music is required.

REQUIREMENTS FOR GRADUATION.

GENERAL REQUIREMENTS.

Candidates for a teacher's certificate in any of the three courses mentioned above must present a high school diploma or equivalent credits. They must also complete courses 1, 2, 3, and 4 in theory of music, and courses 5 and 6 in history of music, and show satisfactory proficiency in ensemble work.

Candidates for an artist's diploma must meet all the requirements imposed for the teacher's certificate and appear satisfactorily in a graduating recital.

VOICE.

Candidates for the teacher's certificate in voice, in addition to the above general requirements, must satisfactorily complete the three-year course in voice as outlined below, and must possess the ability to perform acceptably selections from the standard oratorios and operas. They must also complete one year of work in each of the modern languages—French, German and Italian, and two years of piano.

Candidates for the artist's diploma in voice must satisfy all the requirements for the teacher's certificates, and must complete the fourth year's work in voice.

PIANO.

Candidates for the teacher's certificate in piano, in addition to the general requirements, must satisfactorily complete the three-year course outlined below. They must also complete the course in ensemble playing.

Candidates for the artist's diploma in piano must satisfy all the requirements for the teacher's certificate and must complete the fourth year's work in piano. A graduating recital must be given, part of which program shall consist of a standard concerto for pianoforte and orchestra.

VIOLIN.

Candidates for the teacher's certificate in violin must satisfactorily complete the three-year course in violin music as outlined below, including the concertos of Viotti, Rode and Kreutzer, and the lighter works of some modern composer. They must also have some knowledge of piano playing.

Candidates for the artist's diploma, in addition to the work required for the teacher's certificate, must complete the four years' work in violin music and give a graduating recital program including one sonata or concerto, one trio or quartet and solos.

NOTE.—Students desiring to become candidates for certificates or diplomas should note that while the above mentioned courses are referred to as three-year and four-year courses no definite period of time can be assigned for their completion. In all cases certificates and diplomas are awarded on the basis of the proficiency acquired, rather than on the length of time devoted to the course.

PUBLIC SCHOOL MUSIC.

Candidates for the supervisor's certificate in public school music must satisfactorily complete the course in public school music as indicated below and must do satisfactory work both in voice and piano. In addition they must have credit for courses in musical theory (Harmony 1 and 2 and History of music 5 and 6), education (Education 4 and 5, College of Arts and Sciences), sight singing, choral singing and accompanying.

DEPARTMENTS OF INSTRUCTION.

Strict adherence to a fixed list of studies is not required. The needs of the individual student are considered and the studies varied accordingly. An idea of the work covered in the different classes may be obtained from the following:

VOICE.

MR. BLACK AND MRS. MARSHALL.

First Grade—Technique; scales, arpeggios, etc.; vocalises, Panofka and Concone, Vaccai and Marchesi in Italian. Simple songs in Italian and English.

Second Grade—Technique; scales, Lutgen, Concone, Lamperti Panofka, etc. Vannucini in Italian; songs in Italian and English. Ensemble; duets, trios and quartets.

Third Grade—Technique; Bona, Lutgen, Concone, Bordogni, etc. Arias from standard grand operas and oratorios. Ensemble.

Fourth Grade—Technique; Bona, Lamperti, Concone, Aprile, etc.,

SIGHT-READING.

MR. BLACK.

This class meets once each week. In it is offered some preliminary work in harmony and notation in their particular relation to singing. The "movable do" is used; a modern and easily comprehended textbook is employed.

This work is required of vocal students. No fee is asked of them, but for students from other departments a charge of $5.00 a semester is made. This course is recommended as a preliminary for beginners in voice.

PIANO.

MR. BUTTERFIELD, MRS. SNEE AND MISS MOORE.

To develop a love for and a knowledge of the best in the literature for pianoforte is the aim of this department. The varied needs of the individual student are carefully observed by each instructor;

with the cooperation of the pupil, actual ability in playing and all round musicianship are readily acquired.

There will be thorough training in all the fundamentals of pianoforte technique. The course required of candidates for the teacher's certificate or the artist's diploma comprises compositions from the following masters: Bach, Scarlatti, Handel, Mozart, Beethoven, Schubert, Weber, Mendelssohn, Schumann, Chopin, Liszt, Rubenstein, Brahms, Grieg, Saint-Saens, Schutt, Moszkowski, MacDowell, Franck, Reger, Rachmaninoff, Chaminade and Debussy.

VIOLIN.

Miss Horne.

The mastery of the violin, requiring, as it does, years of specialized effort, tends to restrict students in their musical studies. This course aims to give a thorough training in all the essentials of violin playing, and at the same time to pave the way to a broader, more general culture, which is a part of the true musician's education.

The course required of the candidates for the teacher's certificate comprises the Sevcik School of Music; elementary studies and exercises by Hoffman, Dancia, Wohlfahrt, Kayser and Dont; more advanced studies by Meerts, Mazas, Alard, Casorti, Kreutzer, Rhode, etc.

PREPARATORY PIANO AND VIOLIN.

The School of Music offers a well organized preparatory course in piano and violin. The beginner's course has two lessons a week after school hours. Pupils generally remain in this course two years.

A course in violin instruction is offered for children, corresponding to the course of a similar nature in the piano department. Children who have had no training in music are admitted in this class.

PIPE ORGAN.

Mrs. Snee.

The organ course is extended to provide a thorough and complete preparation for the work of a church organist and accompanist.

A certain facility at the piano and in sight-reading is necessary before this work is taken up.

Stainer's Organ Primer, with special pedal studies and hymn playing comprise the preparatory work.

Rink's Organ School, Buck's studies in Phrasing and the works of Bach, Mendelssohn, Guilmant and Rheinberger comprise the groundwork of study through the course.

PUBLIC SCHOOL MUSIC.

MISS WIECKING.

This course is intended for those contemplating the teaching of music in public schools, and will deal with the presentation of music from the kindergarten through the high school. It will include a study of the development of tone and rhythm in the different grades, of the songs and material suitable for each grade, of the care of the child's voice and the material for chorus and orchestra work in high school.

WOOD AND BRASS INSTRUMENTS.

MR. MESTREZAT.

Opportunity is offered in this course to obtain the instruction necessary to fit one to play the various wood-wind and brass instruments used in orchestras and bands.

ENSEMBLE.

MISS HORNE.

1. **Lessons in Accompanying.** This course is intended to furnish opportunity to advanced students to acquire the art of accompanying songs, violin and cello solos.

2. **Chamber Music.** The study of sonatas, trios and string quartets by Hayden, Mozart, Beethoven, Bach, Handel, Mendelssohn, Gade, Greig, etc. Open to violinists, cellists, pianists and viola players. A preparatory class is also offered, the work to be studied including trios by Reinecke, Bohm, Hayden, Hellmsberger, Schubert and Weber.

3. **Orchestra Music.** A study of the usual orchestral works and of accompaniments of pianoforte and violin concertos.

CHORUS SINGING.

MR. BLACK.

The choral society meets for rehearsals once each week, and affords opportunity to obtain the pleasure and benefit of chorus singing as well as to acquire familiarity with the field of choral work.

THEORY OF MUSIC.

Miss Hayes.

Ffteen hours of the following courses may be offered for credit in the College of Arts and Sciences:

1. **Harmony.** (5 Hrs.) Intervals. Scale and melody writing. Construction of the period. Triads, inversions, chord connections in three and four parts, cadences, chord of the seventh, inversions. Modulation.

First semester; 9:00; 47 W.

2. **Harmony.** (5 Hrs.) Harmonizing of melodies employing the use of triads, dominant, diminished and secondary seventh chords, with inversions, in dispersed harmony. Chorals. Chants.

Second semester; 9:00; 47 W.

3. **Counterpoint.** (5 Hrs.) Single melodic line. Narrow and wide leaps. Counterpoint in one, two, three, four and more parts. Syncopation, rests, ties. Diversity of rhythmic movement. Modulations. Motive development. Prerequisite: Harmony 1 and 2.

First semester; 11:00; 47 W.

4. **Form and Analysis.** (5 Hrs.) Chord reading. Primary forms. Canon in various intervals. Chamber music, oratorios and symphonies. The fugue form. The sonata form. Romantic art forms and modern forms. Orchestration.

Second semester; 11:00; 47 W.

5. **History of Music.** (4 Hrs.) A general survey of the history of music. Drill in the pronunciation of names. Ancient music. Classic music.

First semester; M. T. Th. F., 10:00; 47 W.

6. **History of Music.** (4 Hrs.) Music of the nineteenth century and present day topics. Romantic period in composition and opera. Modern period. Recent opera and oratorio. Critics and criticism. Present state of music. Twentieth century composers. Illustrations of periods by instructor and class.

Second semester; M. T. Th. F., 10:00; 47 W.

SUMMER SCHOOL.

The University Summer School begins each year at the close of the second semester (about June 15) and lasts nine weeks. Several members of the Music School Faculty are in residence for the first six weeks and offer courses of special interest to those students who can attend only in summer for particular pains are taken to cover all the ground possible in six weeks and the courses of study are arranged with that end in view.

TUITION.

The following table shows the rates of tuition for private lessons of thirty minutes in length:

	Lessons a Week		
Voice	One	Two	Three
Louis Black	$25.00	$40.00	$55.00
Genevieve Elliott Marshall	18.00	28.00	
Piano			
Frederick Curtis Butterfield	25.00	40.00	55.00
Grace Martin Snee	18.00	28.00	38.00
Susan Maxwell Moore	18.00	28.00	38.00
Violin			
Margaret Horne	22.50	35.00	50.00
Pipe Organ			
Grace Martin Snee	25.00	40.00	55.00
Wood and Brass Instruments			
Walter Mestrezat	14.00	20.00	
Intermediate Piano	12.00	18.00	
Intermediate Violin	12.00	18.00	
Public School Music			
Hermine Wiecking	12.00 a sem.		
Ensemble			
Accompanying lessons	18.00 a sem.		
Chamber music	10.00 a sem.		
Theory: Class daily, recitation one hour			
Harmony, Analysis or Counterpoint	20.00 a sem.		
Musical history	16.00 a sem.		
Tuition in other classes as follows:			
Preparatory violin	12.00 a sem.		
Prepartory piano	12.00 a sem.		
Sight reading	5.00 a sem.		

Piano for practice, one hour a day, will be furnished at $6.00 a semester; two hours a day at $10.00 a semester; three hours a day at $14.00 a semester; four hours a day at $18.00 a semester.

Pipe organ practice, one hour a day, $10.00 a semester.

Students whose work is wholly in the School of Music pay only tuition.

Students who register in the School of Music and take University work not required in the music courses are subject to the usual University fees except the athletic fee.

French 1 and 2, German 1 and 2, Italian 1 and 2, and Education 4 and 5 are required in the music courses.

THE SUMMER SCHOOL

SHORT TERM, SIX WEEKS, JUNE 18 TO JULY 28, 1917
FULL TERM, NINE WEEKS, JUNE 18 TO AUGUST 18, 1917

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

WAITMAN BARBE, A.M., LITT.D., (Director of the Summer School, and Professor of English in the University), *English Literature*

CHARLES WILLIAM KENT, PH.D., LITT.D. (Professor of English Literature in the University of Virginia) *English Literature*

JOHN HARRINGTON COX, A.M., (Professor of English Philology in the University), *English Literature*

DAVID DALE JOHNSON, A.M., (Associate Professor of English in the University), *English Composition*

WALTER BARNES, A.M. (Head of the Department of English in the Fairmont Normal School) *English Literature and Composition in the Grades*

REBECCA LUELLA POLLOCK, A.M. (Instructor in English in the University), *English Literature and Composition*

JASPER NEWTON DEAHL, PH.D., (Professor of Education in the University), *Education*

ASA GEORGE STEELE, PH.D., (Associate Professor of Education in the University), *Education*

EDWIN AUGUSTUS LEE, A.M., (Assistant Professor of Vocational Education in Carnegie Institute), *Education*

SARAH E. GRISWOLD, Winnetka, Illinois. (Formerly of Chicago Normal School), *Principles and Methods of Teaching Common School Subjects*

MARY BIRD FONTAINE, (Supervisor of English in the Charleston, West Virginia, Public Schools), *Principles and Methods of Teaching Reading*

CARRIE B. EDMONDSON, (Critic Teacher in Northern Illinois State Normal School), *Observation Classes, Seventh and Eighth Grades Grades*

WINIFRED I. WILLIAMS, (Critic Teacher in Fifth and Sixth Grades, State Normal School, LaCrosse,, Wis.), *Observation Classes, Fourth, Fifth and Sixth Grades*

ANNA M. BOYDSTON, (Primary Supervisor in Morgantown Public Schools), *Observation Classes, First, Second and Third Grades*

ADA REINER, (Primary Teacher, Graduate of Pratt Nnstitute), *Observation Classes, First, Second and Third Grades*

NANCY AMBROSE, *Student Assistant in Public School Drawing*

GRACE M. GRIFFIN, A.B., (Supervisor of Physical Training in the Public Schools of Helena, Mont.), *Physical Education for Women; School Plays and Games for Children*

GEORGE EDMONDSON PYLE, (Assistant Professor of Physical Education in the University), *Physical Education for Men; Coaching in Athletics for High Schools*

JAMES MORTON CALLAHAN, PH.D. (Professor of History and Political Science in the University), *History and International Law*

CHARLES AMBLER, PH.D. (Professor of History in Randolph-Macon College), *History*

JOHN ARNDT EIESLAND, PH.D. (Professor of Mathematics in the University), *Mathematics*

JOSEPH ELLIS HODGSON, PH.D. (Professor of Mathematics in the University), *Mathematics*

CHARLES WILLIAM WAGGONER, PH.D. (Professor of Physics in the Uuiversity), *Physics*

FREDERICK WILSON TRUSCOTT, PH.D. (Professor of German in the University), *German*

MADISON STATHERS, PH.D. (Professor of Romance Language in the University), *French; Spanish*

CHARLES BENTON CANNADAY, A.M. (Professor of Latin in the University), *Latin*

LUCIUS MOODY BRISTOL, PH.D. (Assistant Professor of Sociology in the University), *Sociology; Economics*

JOHN LEWIS SHELDON, PH.D. (Professor of Botany in the University), *Botany; Nature Study*

ROBERT CLIFTON SPANGLER, A.B. (Instructor in Botany in the University), *Botany*

JOHN LEE COULTER, PH.D. (Dean of the College of Agriculture and Director of the West Virginia University Experiment Station), *Rural Life Problems*

CHARLES W. WINKLER, PH.D. (Professor of Agricultural Education in the University), *Agricultural Education*

LEONARD MARION PEAIRS, M.S. (Professor of Entomology in the University), *Entomology*

EARL WOODDELL SHEETS, M.S. (Professor of Animal Industry in the University) *Animal Industry*

FORREST WILBUR STEMPLE, M.S. (Associate Professor of Agronomy in the University), *Agronomy*

EDGAR LEWIS ANDREWS, B.S. (Assistant Professor of Poultry Husbandry in the University), *Poultry Husbandry*

EUGENE CURTIS AUCHTER, B.S., (Assistant Professor of Horticulture in the University), *Horticulture*

ANDREW J. DADISMAN, M.S. (Assistant Professor of Farm Management in the University), *Agricultural Education; Farm Management*

WILLIAM A. RHEA, M.S. Agr. (Instructor in Dairy Husbandry in the University), *Dairy Husbandry*

THEODORE C. McILVAINE, M.S. (Instructor in Agronomy in the University), *Agronomy*

HARLIN REX COKELEY (Instructor in Animal Husbandry), *Animal Husbandry*

CALLIE CONGIE NUZUM, B.S. (Instructor in Home Economics in the University), *Home Economics*

....., *Home Economics*

HUBERT HILL, M.S. (Assistant Professor of Chemistry in the University), *Chemistry*

SAMUEL MORRIS, A.M. (Instructor in Chemistry in the University), *Chemistry*

HARRISON RANDALL HUNT, PH.D. (Iustructor in Zoology in the University). *Zoology*

L. W. WAHLSTROM, (Director of Manual Training in the Francis W. Parker School, Chicago), *Manual Training*

EDWIN FAYETTE CHURCH, JR., M.S. in M.E. (Professor of Machine Design in the University), *Mechanical Drawing*

RAYMOND EGBERT SEAMAN, (Instructor in Woodworking in the University), *Woodworking and Pattern Making*

RUFUS ASA WEST, (Instructor in Metalworking in the University), *Metalworking*

SIMEON THOMPSON HART, (Assistant Professor of Machine Construction in the University), *Machine Shop*

EDWARD NATHAN ZERN, B.S., E.M. (Professor of Mining Engineering in the University), *Mining*

LONNA DENNIS ARNETT, PH.D. (Librarian of the University), *Library Science*

LOUIS BLACK, (Director University School of Music), *Voice*

ETHEL BORDEN BLACK, *Voice Coaching and Repertoire*

GENEVIEVE ELLIOTT MARSHALL, (Assistant in Voice in Universitl School of Music), *Voice*

FREDERIC CURTIS BUTTERFIELD, A.B. (Head of Piano Department in University School of Music), *Piano*

MARGARET HORNE, (Instructor in Violin in the University School of Music), *Violin and Ensemble*

GRACE MARTIN SNEE, (Iustructor in Pipe Organ in the University School of Music), *Pipe Organ*

FLORA RAY HAYES, (Iustructor in Theory and History of Music in the University School of Music), *Theory and History of Music*

HERMINE WIECKING, (Instructor in Public School Music in the University School of Music), *Public School Music*

LOUISE BOEHM, *Student Assistant in Public School Music*

PRELIMINARY ANNOUNCEMENTS.

LENGTH OF THE SESSION.

The eighteenth session of the Summer School of West Virginia University will begin Monday, June 18, 1917, and close Saturday, August 18. The short term of six weeks will close on July 28.

Most of the credit courses will extend through the entire session of nine weeks, but credit may also be had for six weeks' work by students who remain for only that length of time.

Some of the professional courses (including the work in the demonstration or observation school) intended especially for teachers, will last through the first six weeks only.

CLASSES OF STUDENTS.

The students who attend the Summer School may be divided into five general classes:

1. Those who desire credit on their preparatory requirements or toward their college or advanced degrees for the work done.

2. Those who take courses which will entitle them to the renewal, without further examination, of their first-grade uniform teachers' certificates.

3. Those who enter regular classes for serious work, but who do not desire credit for it. Such students may or may not take the examinations at the close of the term. Most of them do not.

4. Those who attend the observation classes, the lectures, the musical recitals, etc., but do not enter upon serious or continuous study. Such students are usually persons who feel too much worn out when summer comes to take up difficult work, but who nevertheless desire to get as much profit and pleasure as possible out of the Summer School.

5. County superintendents, district superintendents, school principals, and others who wish to prepare themselves better for educational leadership.

GRADUATE COURSES.

A much larger number of courses which may be counted toward graduate degrees will be offered than ever before. College graduates will thus be enabled to work toward their master's degree. A special list of courses will be published in the Detailed Announcements. All who are interested in graduate work should write to Dr. J. M. Callahan, Chairman of the Committee on Graduate Study.

ADMISSION.

There are no requirements for admission to the Summer School unless the student desires University credit for the work to be done. In such cases he must satisfy his instructors that he is prepared to take the courses selected. If he desires regular classification he must meet the regular University requirements for admission, a statement of which may be found in the University catalogue.

FEES.

The entire fee for everything offered in the Summer School (excepting private instruction in music) is $5.00, whether the student be a resident of West Virginia or of some other State, provided that University credit for summer work is not desired. If University credit for the work is desired, a matriculation fee of $5.00 must be paid, unless the sudent is already a matriculate of the University.

Students from States other than West Virginia who desire to obtain University credit for the summer work will pay also a tuition fee of $10.00.

If, however, no University credit is desired, the total fee for students from other States, as well as from West Virginia, will be only $5.00. This statement applies, of course, to all students desiring certificates for the work done in the Summer School.

Small laboratory fees depending upon the courses taken, are charged in some of the laboratory courses.

CREDITS, REPORTS, AND CERTIFICATES.

Entrance credit or college credit may be had for most of the Summer School courses. The amount of credit will be found stated after each course in the Detailed Announcements, ready about April 1.

Only regular matriculated students may use Summer School credits toward a degree at West Virginia University, but all others who do the work of the Summer School courses and take the examinations in them will receive reports of their grades to be used in any other way they may like.

All grades, whether those of matriculated University students or of others, will be mailed to the students by the Registrar at the close of the nine weeks course.

Students who do not work for grades will receive the following certificate by applying to the Director of the Summer School:

"This is to certify that.....
attended the Summer School of West Virginia University, 1917, for.....weeks and pursued the following work."

The work of the students attending the Summer School for the purpose of renewing their teachers' certificates will be reported directly to the State Department of Schools, by the Director of the Summer School.

REGISTRATION.

Students will register on Monday, June 18, with the Registrar, in the south wing of Woodburn Hall. All students whether previously in attendance at the University or not, must register before entering the Summer School.

SUMMER SCHOOL CONVOCATION.

The Summer School Convocation exercises will be held Tuesday evening, June 19, at 8:30 o'clock in Commencement Hall.

TEXT-BOOKS.

All text-books needed may be obtained at the University bookstore, room 15, Woodburn Hall, practically at cost.

LIVING ACCOMMODATIONS.

For Women.

Miss Susan Maxwell Moore, Dean of Women, has charge of the living accommodations for women students in the Summer School.

Room and board in Women's Hall and Women's Hall Annex costs from $4.00 to $5.00 a week, payable for six or nine weeks in advance. The young women furnish their own sheets and pillowslips. (For laundering these there is a charge of fifty cents for six weeks and seventy-five cents for nine weeks.)

Desirable rooms and board may be obtained in the immediate neighborhood of Women's Hall as well as in other ports of the town. The cost at private boarding houses is usually a little more than it is at the Hall.

It is highly desirable, though of course not absolutely necessary, to engage living accommodations early. Write to Miss Susan Maxwell Moore, Dean of Women, Morgantown, West Virginia, to secure full information and to engage rooms and board, either in the Hall or out of it.

All women students are requested to make Woman's Hall, 247 Willey Street, headquarters upon their arrival. Dean Moore and her assistants will see that they are provided with living accommodations. If the committee should fail to meet incoming students at the stations, they should report at the Hall. Loop streetcars go directly from the railway stations to the Hall.

For Men.

Board and lodging may be obtained, together, in Morgantown at the Men's Commons Club, 52 University Driveway, for $3.75 a week; board alone for $3.00 a week, and room alone, with two in a room, for seventy-five cents to $1.50 a week, and board may be had in private boarding houses at from $3.00 to $4.00 a week. Men desiring accommodations should address R. B. Hersey, Secretary Y. M. C. A., Morgantown, West Virginia, stating kind of place wanted, locality desired, and price they are willing to pay.

Prospective Summer School students are urged to write directly either to Miss Moore or Mr. Hersey about rooming and boarding accommodations, rather than to the President of the University or the Director of the Summer School.

DEMONSTRATION OR "MODEL" SCHOOL.

A demonstration or "model" school will be conducted during the first six weeks of the Summer School. It will be composed of children from all the regular eight grades of the elementary school, and will be in charge of trained and successful teachers. Students in some of the classes in the Department of Education will be expected to do some practice teaching in the demonstration school.

FREE MUSIC RECITALS AND MATIN SERVICE.

Weekly lecture recitals, under the direction of the School of Music, will be given. Great composers will be briefly discussed and their works interpreted with voice, piano, violin or organ by Director Black, Miss Horne, Mr. Butterfield, and others. These recitals are free to students and the public. A brief chapel service will precede these recitals. They will be held every Wednesday at 11 o'clock in Commencement Hall. During that hour no other exercises will be held in any department of the Summer School.

DETAILED ANNOUNCEMENTS.

Detailed announcements giving full information concerning all of the courses offered, and other features of the Summer School, will be issued April 1 and may be had upon request. Letters of inquiry will be answered with pleasure. Address the Director of the Summer School.

WAITMAN BARBE,
Morgantown, W. Va.

FRANK BUTLER TROTTER, LL.D.,
President of the University.

THE DIVISION OF MILITARY SCIENCE AND TACTICS

THE FACULTY.

FRANK BUTLER TROTTER, A.M., LL.D., *President of the University*

JAMES H. LAUBACH, *First Lieutenant, Infantry, United States Army, Professor of Military Science and Tactics and Commandant of Cadets*

GEORGE W. MAY, *Ordnance Sergeant, United States Army, retired, Assistant Commandant*

ARTHUR AMY, *Sergeant, United States Army, Assistant Commandant*

West Virginia University being one of the beneficiaries of the Act of Congress of 1862, instruction in military tactics is made compulsory for the freshman and sophomore years.

The Division is in charge of an officer of the United States Army, detailed by the War Department, as professor of military science and tactics. The Cadet Corps is inspected once each year by an officer of the General Staff of the Army.

An Infantry Unit, Senior Division, of the Reserve Officers' Training Corps was established by the War Department on December 12, 1916,

All cadets are required to wear a neat-appearing uniform at drill. This uniform may be worn with propriety on all occasions. Its cost is about $17.50.

All cadets are divided into classes, i. e.: state cadets and volunteer cadets.

State cadets are those who receive appointment under the provisions of the act of the legislature of the State of West Virginia given below.

Volunteer cadets are all other cadets belonging to the cadet corps of the University.

Extract from Chapter Forty-five of the Code of West Virginia.

Section 173. Besides prescribing the general terms upon which students may be admitted to the University, the regents may admit, all male students not under sixteen years of age nor over twenty-five years of age, as cadets in the military department. Their term of service shall be four years, but any cadet at the expiration of his first term shall be entitled to re-enlist for the further term of two years upon giving notice of his intention to the commandant of cadets at least thirty days before the expiration of such term.

Section 174. The cadets admitted under the provisions of the preceding section shall be entitled to all the privileges, immunities, educational advantages and benefits of the University, free of charge for admission and tuition; and each of them may have books and stationery to the value of fifteen dollars in any fiscal year, free of charge. They shall constitute the public guard of the University and the property belonging thereto, and also of the ordnance and ordnance stores and camp and garrison equipage, of which a sufficient supply shall be kept in the arsenal belonging to the institution; and said cadets shall be individually and collectively responsible for the preservation and safe keeping of all arms and camp equipage belonging to said institution.

REQUIRED WORK IN MILITARY SCIENCE.

The following order has been adopted by the State Board of Regents:

Ordered that all male students, with the exceptions hereinafter named, enroll themselves in the Division of Military Science and follow diligently the course of instruction provided therein. Proficiency in this course shall be required for graduation.

Practical and theoretical instruction shall be given four hours per week throughout the school year. A credit for one hour shall be given for each semester's work satisfactorily completed. Such credit shall be included in the computation of the student's standing at the end of each semester.

Every student enrolled in the Department of Military Science, whether he holds a cadet appointment or not, shall at the time of his enlistment deposit with the financial secretary of the University $17.50 to help cover the cost of the complete uniform to be furnished him. This deposit is not to be refunded, but in case a cadet serves longer than two years, he shall at any time after the begining of his third year of service be furnished a new uniform or such part thereof as

the commandant of cadets may find that he needs, without cost to him.

The following classes of students shall not be required to enroll themselves in the Military Division, but may elect to do so:

(1) All students who are citizens of a foreign country and do not intend to become citizens of the United States.

(2) All students who at date of entrance in the University are more than twenty-three years of age.

(3) All graduate students.

(4) All students whose studies are entirely in the School of Music.

(5) All students who are taking only the short course, or the special winter course, or agricultural extension work in the College of Agriculture.

(6) All students who are classified as juniors or seniors in the various colleges, and all who have completed two years' service in the military division.

(7) All students who are physically unable to perform military duty.

A board, to be known as the military and gymnasium board, shall be composed of the commandant of cadets, the director of physical training, and a surgeon of the corps of cadets, designated by the President. This board shall act upon claims for exemption from military service.

Students who claim exemption under any one of the first six cases must, within seven days after their registration in the University, present to the commandant, in writing, their request accompanied by such evidence as is relied upon to support the request. A failure to make the request within the stated time shall bar the student from claiming exemption.

Applicants for exemption on the ground of physical disability shall be carefully examined by a surgeon of the corps. A fee of one dollar to be paid to the examining surgeon shall be charged for such examination.

Students exempted under the seventh case shall, upon recommendation of the military and gymnasium board, be required to register for such physical training as they can take until they have earned a credit equal to that given for the prescribed military work.

In none of the preceding cases shall a student absent himself until his application has been acted upon.

It shall be the duty of the commandant to notify the chairman of the committee on classification and grades whether the military and gymnasium board exempts a student or recommends that he be required to register for other work in place of military drill.

Whenever the cause for exemption shall no longer exist, it shall

be the duty of the student to present himself for drill at the next drill period.

Students may appeal from the decision of the commandant of cadets or the military and gymnasium board, in which case the appeal shall be decided by the council of administration.

All cadet officers taking military instruction as an elective shall be, as to their tuition fees, on the same basis as state cadets.

SPECIAL REWARDS FOR MILITARY EXCELLENCE.

The names of the most distinguished cadets of the graduating class are sent to the Adjutant General of the Army and to the Adjutant General of the State.

All graduates of the Military Division are eligible, within five years after graduation, to commissions as first lieutenants in the Organized Militia of the State, without examination.

The State Board of Regents offers the following medals as special rewards for execllence in military training:

(1) To the cadet having the best record for shooting on the University Fifle Team, a gold medal; (2) To the cadet having the highest aggregate score at Company Team Rifle Competition, a gold medal; (3) To the cadet having the record for Military Training and Discipline, a silver medal; (4) To the cadet who shall write the best essay on preparation against war, fifty dollars.

ARMORY.

The Armory (60 by 120 feet) is used as a drill hall during inclement weather. This building is the home of the cadet corps, and all entertainments given by them are held therein, under the supervision of the commandant of cadets.

ADMINISTRATION AND INSTRUCTION.

For the purpose of administration and drill the cadet corps is organized as a regiment of infantry: Field, Staff, Band, and twelve companies.

The work in military science is taken in connection with other University work, and requires about four hours each week. The

course of instruction is intended to fit all who graduate therein to perform efficiently the duties of officers in the Officers' Reserve Corps, the Organized Militia of West Virginia, or of volunteers. The winter months are devoted to theoretical instruction in tactics and other military subjects, together with practical instruction in drill and in gallery practice.

BAND.

A band of forty musicians is authorized by the Board of Regents. Band cadets are volunteer cadets. They receive the same allowances as state cadets and are governed by the same rules and regulations. They are instructed in military drill to include the school of the soldier and of the squad.

INFORMATION FOR APPLICANTS FOR APPOINTMENT TO THE CADET CORPS.

1. The applicant must not be under sixteen nor over twenty-five years of age.

2. He must be a bona fide resident of West Virginia.

3. He must be sound physically and of good moral character.

4. He must deposit $17.50 with the financial secretary of the University to cover the cost of his uniform.

5. He is allowed free stationery and the use of text-books to the value of $15.00 a year. He pays no matriculation, tuition, or contingent fees to the University. If he graduates from any department of the University while a member of the cadet corps, he is allowed to retain his text-books.

6. The work of the corps does not interfere with the student's scholastic duties. Cadets may take courses in any of the departments of the University.

7. Students who desire cadet appointments should upon their arrival at the University present themselves at the office of the commandant, in the armory, and obtain the necessary information about registering, etc.

8. Any cadet who is absent without leave for more than ten days will forfeit his appointment, and will be dropped from the rolls. He cannot re-enter the University without special permission.

COURSES OF INSTRUCTION.

The following courses in military science and tactics are offered. All instruction is under the supervision of the commandant of cadets who is assisted by the senior cadet officers.

COURSE OF TRAINING FOR INFANTRY UNITS OF THE SENIOR DIVISION.

1. **Military art.** Three hours a week (counting 14 units).

(a) Practical. Weight 10. Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include the School of the Soldier, Squad and Company, close and extended order. Preliminary instruction sighting position and aiming drills, gallery practice, nomenclature and care of rifle and equipment.

(b) Theoretical. Weight 4. Theory of target practice, individual and collective (use of landscape targets made up by U. S. Military Disciplinary Barracks, Fort Leavenworth, Kans.); military organization (Tables of Organization); map reading; service of security; personal hygiene.

2. **Military art.** Three hours a week (counting 14 units).

(a) Practical. Weight 10. Physical drill (Manual of Physical Training—Koehler); Infantry drill (U. S. Infantry Drill Regulations), to include School of Battalion, special attention devoted to fire direction and control; ceremonies; manuals (Part V, Infantry Drill Regulations); first-aid instruction; range and gallery practice.

(b) Theoretical. Weight 4. Lectures, general military policy as shown by military history of United States and military obligations of citizenship; service of information; combat (to be illustrated by small tactical exercises); United States Infantry Drill Regulations, to include School of Company; camp sanitation for small commands.

3. **Military art.** Three hours a week (counting 14 units).

(a) Practical. Weight 10. The same as course 2(a). Combat firing, if practicable, but collective firing should be attempted in indoor ranges by devices now in vogue at United States Disciplinary Barracks.

(b) Theoretical. Weight 4. United States Infantry Drill Regulations, to include School of Battalion and Combat (350-622); Small-Arms Firing Regulations; lectures as in course 2(b); map reading; camp sanitation and camping expedients.

4. **Military art.** Three hours a week (counting 14 units).

(a) Practical. Weight 10. The same as course 2(a); signaling; semaphore and flag; first-aid. Work with sand table by constructing to scale intrenchments, field work, obstacles, bridges, etc. Comparison of ground forms (constructed to scale) with terrain as represented on map; range practice.

(b) Theoretical. Weight 4. Lectures, military history (recent); service of information and security (illustrated by small tactical problems in patrolling, advance guards, rear guards, flank guards, trench and mine warfare, orders, messages, and camping expedients); marches and camps (Field Service Regulations and Infantry Drill Regulations).

5. Military art. Five hours a week (counting 24 units).

(a) Practical. Weight 13. Duties consistent with rank as cadet officers or noncommissioned officers in connection with the practical work and exercises laid down for the unit or units. Military sketching.

(b) Theoretical. Weight 11. Minor tactics; field orders (studies in minor tactics, United States School of the Line); map maneuvers. Weight 8. Company administration, general principles (paper and returns). Weight 1. Military history. Weight 2.

6. Military art. Five hours a week (counting 24 units).

(a) Practical. Weight 13. Same as course 5(a). Military sketching.

(b) Theoretical. Weight 11. Minor tactics (continued); map maneuvers. Weight 8. Elements of international law. Weight 2. Property accountability; method of obtaining supplies and equipment (Army Regulations). Weight 1.

7. Military art. Five hours a week (counting 24 units).

(a) Practical. Weight 13. Duties consistent with rank as cadet officers or noncommissioned officers in connection with the practical work and exercises scheduled for the unit or units. Military sketching.

(b) Theoretical. Weight 11. Tactical problems, small forces, all arms combined; map maneuvers; court-martial proceedings (Manual for Courts-martial). International relations of America from discovery to present day; gradual growth of principles of international law embodied in American diplomacy, legislation, and treaties. Lectures, psychology of war and kindred subjects. General principles of strategy only, planned to show the intimate relationship between the statesman and the soldier (not to exceed 5 lectures).

8. Military art. Five hours a week (counting 24 units).

(a) Practical. Weight 13. Same as course 7(a).

(b) Theoretical. Weight 11. Tactical problems (continued); map maneuvers. Rifle in war. Lectures on military history and policy.

MILITARY GRADUATES.

Reported at Commencement, June, 11916.

The following named cadets, having completed the prescribed course of instruction, are announced as graduates of the Division of Military Science and Tactics:

Cadet Major ELVIN A. HAMILTON, Field and Staff.
Cadet Major JAMES P. WEAVER, Field and Staff.
Cadet Captain LUTHER O. GRIFFITH, Company "D."
Cadet Captain EUGENE J. KERSTING, Company "B."
Cadet Captain DORSEY BRANNAN, Company "A."
Cadet Captain PAUL M. FULCHER, Adjutant, Field and Staff.
Cadet Captain HARRY FERGUSON, Company "E."
Cadet First Lieutenant CARL H. CATHER, Company "C."
Cadet First Lieutenant RALPH B. HUTCHINSON, Company "B."
Cadet First Lieutenant FRED L. LEMLEY, Company "A."
Cadet Second Lieutenant CLARENCE F. WELLS, Company "F."
Cadet Second Lieutenant JULIAN L. HAGEN, Q.M. and C. 1st Bn., Staff.
Cadet Battalion Q.M. Sergeant CHARLES R. HUFFMAN, Field and Staff.
Cadet Sergeant BENJAMIN H. ASHWORTH, Company "F."
Cadet Corporal EUGENE R. VAWTER, Company "B."
Cadet Private CARLYLE R. SMITH, Company "B."
Cadet Private ANDERSON W. HALL, Company "E."
Cadet Private LLOYD ARNOLD, Company "B."
Cadet Private JAMES THOMPSON, Company "B."
Cadet Private GEORGE R. AYERS, Company "F."

AWARDS.

Upon the decision of the judges, the sabre offered by the Board of Regents, to the captain of the best drilled company, is awarded to Cadet Captain D. BRANNAN, Company "A."

Upon the decision of the Judges, the gold medal offered by the Board of Regents for training and discipline was awarded to Cadet Private J. R. WATERS, Company "F."

The medals and loving cup and rifle offered by the Board of Regents are awarded as follows:

(1) The loving cup for the company making the highest aggregate score to Company "F," Captain J. A. SAVAGE, commanding.

(2) The gold medal for highest average scores at Record Target practice, and letters for being on more than half of the matches, First Rifle Team, season 1915-16, was awarded to Cadet Bn. Q.M. Sergt. C. W. McDOWELL.

(3) The silver medal for highest scores at Record Target practice, and sweater for being on more than half the matches, First Rifle Team, season 1915-16, fourth season, was awarded to Cadet Corpl. A. K. CARROLL, Band.

(4) The U. S. Rifle, Model 1903, chambered for 1906 ammunition Starguarded, for making the highest score in competition among the Company teams, was awarded to Private A. M. MILLER, Company "F."

(5) Sweater for being on more than half the matches, First Rifle Team, season 1915-16, second season on the team, was awarded to Cadet Captain H. FERGUSON, Company "E."

(6) Letters for being on more than half the matches, First Rifle Team, season 1915-16, were awarded to Cadet Second Lieutenant H. T. PHILLIPS, Company "A."

The following honors were awarded by the Nation Board for the Promotion of Rifle Practice, War Department, Washington, D. C.:

Marksman's Fob, awarded to Cadet Sergeant E. R. HOWERY, Company "E."

Sharpshooter's Fob, awarded to Cadet Private A. M. MILLER, Company "F."

ROSTER OF THE CORPS OF CADETS.

JAMES H. LAUBACH, First Lieutenant, United States Infantry, Commandant.

GEORGE W. MAY, Ordnance Sergeant, United States Army, retired, Assistant Commandant.

ARTHUR AMY, Sergeant, United States Army, Assistant Commandant.

REGIMENTAL FIELD AND STAFF.

D. Brannan	Cadet Colonel
J. N. Simpson	Captain and Surgeon

HEADQUARTERS COMPANY.

J. L. Hagen	Cadet Captain
E. H. Briers	Cadet Regimental Sergt. Major
J. M. Evans	Cadet Batt. Sergt. Maj. 1st. Batt.
G. M. Gray	Cadet Batt. Sergt. Maj. 2d. Batt.
E. Busch	Cadet 1st. Sergeant
G. A. Hawkins	Cadet Color Sergeant
W. S. Shuttleworth	Cadet Color Sergeant
W. A. Mestrezat	Band Leader
M. Brunetti	Cadet Ass't. Band Leader
G. W. Melcher	Cadet Sergeant Bugler
E. C. Anderws	Cadet Band Sergeant
E. S. Matheson	Cadet Band Sergeant
M. H. Thorn	Cadet Band Sergeant
A. K. Carroll	Cadet Band Sergeant
A. R. Collett	Cadet Band Corporal
A. F. Vierheller	Cadet Band Corporal
H. L. McLoughlin	Cadet Band Corporal
R. E. Fidler	Cadet Band Corporal
W. B. Morrison	Cadet Band Corporal
G. M. Thornton	Cadet Band Corporal
R. L. Harlow	Cadet Band Corporal
G. Huffman	Cadet Band Corporal

SUPPLY COMPANY.

E. R. Howery	Cadet Captain
H. E. Wilson	Cadet 2d. Lieut. 1st. Batt.
Ray Ash	Cadet 2d. Lieut. 2d. Batt.
C. W. McDowell	Cadet Regt'l. Supply Sergt.
W. L. Peters	Cadet Regt'l. Supply Sergt.

First Battalion.

FIELD AND STAFF.

R. W. Duthie.....Cadet Major
D. A. Christopher.....Cadet 1st. Lieut. Adjutant

COMPANY "A."

W. Riddle.....Cadet Captain
J. C. Powell.....Cadet 1st. Lieut.
V. C. Compton.....Cadet 2d. Lieut.
H. F. Barnes.....Cadet 1st. Sergeant
R. L. Brock.....Cadet Sergeant
M. E. Phillips.....Cadet Sergeant
E. Bierer.....Cadet Sergeant
F. H. Neely.....Cadet Sergeant
R. L. Furbee.....Cadet Corporal
O. H. Henry.....Cadet Corporal
H. J. Barrett.....Cadet Corporal
V. F. Chancellor.....Cadet Corporal
I. L. VanVoorhis.....Cadet Corporal
F. A. Ice.....Cadet Corporal

COMPANY "B."

J. E. Grose.....Cadet Captain
J. H. G. Shunk.....Cadet 1st. Lieut.
E. C. Glass.....Cadet 2d. Lieut.
J. E. Brannon.....Cadet 1st. Sergeant
F. Houston.....Cadet Sergeant
C. W. Wellen.....Cadet Sergeant
A. H. McCarnes.....Cadet Sergeant
S. C. Butler.....Cadet Sergeant
J. S. Williamson.....Cadet Corporal
E. C. Bennett.....Cadet Corporal
M. S. Duling.....Cadet Corporal
R. B. Walker.....Cadet Corporal
C. W. Chancellor.....Cadet Corporal

COMPANY "C."

M. C. Nelson.....Cadet Captain
L. G. Drake.....Cadet 1st. Lieut.
J. A. Connor.....Cadet 2d. Lieut.
C. W. Hague.....Cadet 1st. Sergeant
L. T. Lawrence.....Cadet Sergeant
K. B. Kyle.....Cadet Sergeant
L. Ankron.....Cadet Sergeant
F. B. Poling.....Cadet Sergeant
F. W. Reed.....Cadet Corporal
J. W. Sisler.....Cadet Corporal
W. B. Madeira.....Cadet Corporal
G. T. McCoy.....Cadet Corporal
R. O. White.....Cadet Corporal
A. M. Miller.....Cadet Corporal

COMPANY "D."

W. H. Boone	Cadet Captain
E. E. Winters	Cadet 1st. Lieut.
C. L. Lazzelle	Cadet 2d. Lieut.
R. F. Ash	Cadet 1st. Sergeant
H. B. Duling	Cadet Sergeant
T. H. McGovern	Cadet Sergeant
D. N. Barber	Cadet Sergeant
W. C. Fisher	Cadet Sergeant
B. C. John	Cadet Corporal
C. R. Kessel	Cadet Corporal
R. B. Swiger	Cadet Corporal
C. McCutcheon	Cadet Corporal

Second Battalion.

FIELD AND STAFF.

J. A. Savage	Cadet Major
E. Bjornsen	Cadet 1st. Lieut. Adjutant

COMPANY "E."

J. W. Easley	Cadet Captain
R. H. Armstrong	Cadet 1st. Lieut.
R. E. Allen	Cadet 2d. Lieut.
F. F. Fox	Cadet 1st. Sergeant
W. J. Sturgiss	Cadet Sergeant
W. S. Jones	Cadet Sergeant
H. L. Donnally	Cadet Sergeant
D. T. Moore	Cadet Sergeant
C. C. Sanders	Cadet Corporal
B. D. Core	Cadet Corporal
O. P. Keadle	Cadet Corporal
H. H. Kerr	Cadet Corporal

COMPANY "F."

E. J. Kaltenbach	Cadet Captain
J. H. Boyd	Cadet 1st. Lieut.
J. M. Lowe	Cadet 2d. Lieut.
W. J. Williams	Cadet 1st. Sergeant
C. R. Young	Cadet Sergeant
J. J. Knight	Cadet Sergeant
C. O. Riggs	Cadet Sergeant
E. M. Wooddell	Cadet Sergeant
C. S. Miller	Cadet Corporal
K. L. Marshall	Cadet Corporal
A. G. Stone	Cadet Corporal
C. Roby	Cadet Corporal

COMPANY "G."

F. M. Brewster	Cadet Captain
A. G. Springer	Cadet 1st. Lieut.
S. A. Trimble	Cadet 2d. Lieut.
H. S. Walker	Cadet 1st. Sergeant
J. M. Orth	Cadet Sergeant
W. S. Price	Cadet Sergeant
H. H. Kane	Cadet Sergeant
F. L. Davis	Cadet Sergeant
T. C. Colcord	Cadet Corporal
H. H. Thompson	Cadet Corporal
D. H. Morris	Cadet Corporal
C. D. Hammond	Cadet Corporal
W. H. Hormell	Cadet Corporal
J. W. Dorsey	Cadet Corporal

COMPANY "H."

J. M. Guiher	Cadet Captain
H. J. Templeton	Cadet 1st. Lieut.
L. H. Miller	Cadet 2d. Lieut.
A. W. Laas	Cadet 1st. Sergeant
R. P. White	Cadet Sergeant
F. M. Sayre	Cadet Sergeant
W. Snedeker	Cadet Sergeant
F. N. Gooding	Cadet Sergeant
A. R. Winter	Cadet Corporal
H. D. Riddle	Cadet Corporal
A. D. Meadows	Cadet Corporal
E. B. Tucker	Cadet Corporal
H. J. Kaltenbach	Cadet Corporal

UNASSIGNED LIST.

H. M. Harper	Cadet Captain
E. J. Kersting	Cadet Captain
L. V. Carpenter	Cadet Captain
J. L. Shugrou	Cadet 1st. Lieut.
H. T. Phillips	Cadet 1st. Lieut.
C. R. Duncan	Cadet Regt'l. Sergt. Maj.
R. C. Darrah	Cadet Batt. Sergt. Maj.
F. M. Morgan	Cadet Sergeant
J. R. Richards	Cadet Sergeant
B. S. Knabenshue	Cadet Sergeant
F. W. Turner	Cadet Sergeant
J. R. Waters	Cadet Sergeant
B. M. Wells	Cadet Sergeant
W. A. Smith	Cadet Corporal
J. B. Dorsey	Cadet Corporal

DEGREES, DIPLOMAS, AND PRIZES

Forty-Ninth Annual Commencement, June 14, 1916.

CANDIDATES FOR DEGREES.

1916

Master of Arts

ENOCH FRANKLIN GEORGE.....RED CREEK
A.B. West Virginia University, 1914

ELIZABETH TAPP PECK.....MORGANTOWN
A.B. West Virginia University, 1905

IVAN VAUGHAN DETWEILER SHUNK.....MORGANTOWN
A.B. West Virginia University, 1913

EDWARD CONRAD SMITH.....SAINT MARYS
A.B. West Virginia University, 1915

ROBERT CLIFTON SPANGLER.....PETERSTOWN
A.B. West Virginia University, 1914

Master of Science in Agriculture

HENRY DORSEY.....MORGANTOWN
B.S.Agr. West Virginia University, 1914

Bachelor of Arts

KATHRYN ALGER.....WHEELING
DAISY CAROLINE ARNETT.....MORGANTOWN
ROBERT LEE BATES.....KEARNEYSVILLE
HUGH HOMER BAUMGARTNER.....MORGANTOWN
DAVID LAMONT CARDEN.....ZELA
ELMA PEARL COMPTON.....MORGANTOWN
LILLIAN CLEVELAND COMPTON.....CUMBERLAND, MD.
EVELYN MARIE COOPER.....CAMERON
IRL NOEL DULING.....MORGANTOWN
SALLIE EVANS.....GRAFTON
JOHN DUNN FARMER.....BOLT
PAUL MILTON FULCHER.....MORGANTOWN
ALVA JASON GIBSON.....SUTTON
ARTIE RUSSELL GROVES.....CUZZART
THEODORE HOLDEN.....HARLIN
JULIAN LAMAR HAGEN.....HUNTINGTON

JESSIE HALL.....MORGANTOWN
REXFORD BRAMMER HERSEY.....GUYANDOTTE
RALPH BRENTON HUTCHINSON.....NEW MARTINSVILLE
WILLIAM HENRY KENDRICK.....MORGANTOWN
OSCAR DOANE LAMBERT.....RED CREEK
LILLIAN RUTH MANEAR.....MORGANTOWN
HARRIETT MARTIN.....SHINNSTON
KATE MEREDITH.....MORGANTOWN
HERBERT MCMILLEN.....MASONTOWN
MYRA MAY NEFFLEN.....KEYSER
WALTER CARPER PHILLIPS.....BUCKHANNON
FRANK JAMES PYLE.....MORGANTOWN
JAMES BREINIG RILEY.....WHEELING
LESTIE RAY RINGER.....ALBRIGHT
URSULA COTTA SHUNK.....MORGANTOWN
IDA WELLS SMITH.....SAINT MARYS
HARRY JEREMIAH STUKEY.....HEDGESVILLE
DAISY ELLA TIMMONS.....TRIADELPHIA
MARY ISABEL TOY.....FREEMAN
SABINA OLIVE WEAVER.....MORGANTOWN
BERNAL ROBINSON WEIMER.....PORT ROYAL, PENNA.
CLARENCE FLOYD WELLS.....MORGANTOWN
FRENCH ARLINGTON YOKE.....MORGANTOWN

Bachelor of Science

IDA RUTH MAXWELL.....MORGANTOWN
MARGARET ELIZABETH MORRIS.....CUMBERLAND, MD.
CALLIE CONGIE NUZUM.....BRIDGEPORT
MABEL GILLIAN RICHARDS.....FAIRMONT
JAMES PLUMMER WEAVER.....MORGANTOWN

Bachelor of Science
(Major in Engineering)

EUGENE JOSIAH KERSTING.....CLARKSBURG
CARLYLE RECTOR SMITH.....PARKERSBURG

Bachelor of Science
(Major in Medicine)

WILLIAM HARRY BOONE.....RONCEVERTE

Bachelor of Laws

JESSE LLOYD ARNOLD.....MOUNDSVILLE
BENJAMIN HARRISON ASHWORTH.....BLUEFIELD
ANDERSON WADE HALL.....FAIRMONT
ELVIN ANDREW HAMILTON.....RICHWOOD

FREDERICK LEIGH LEMLEY.....BURTON
A.B. West Virginia University, 1914
JOHN JOSEPH MATHISON.....WHEELING
LOUIS EDWIN MCWHORTER, JR.....CHARLESTON
HENRY STREIT WALKER.....WINONA
STANLEY BRUCE WILSON.....MOUNDSVILLE
A.B. West Virginia University, 1914

Bachelor of Science in Civil Engineering

ARTHUR TAYLOR BRAGONIER.....SHEPHERDSTOWN
LUTHER OSCAR GRIFFITH.....HUNTINGTON

Bachelor of Science in Electrical Engineering

CHARLES RAY HUFFMAN.....FAIRMONT
JAMES PRINCE LIVELY.....CHARLESTON
WILLIAM ASCHMAN RIHELDAFFER.....CHARLESTON
WILHELM SCHAFFER.....CHARLESTON
HERBERT SIDNEY SUMMERS.....HUNTINGTON
DONALD CLAY TAYLOR.....PARKERSBURG

Bachelor of Science in Mechanical Engineering

CARL HENRY CATHER.....WACO, TEXAS
HENRY STANFORD DILCHER.....CHARLESTON
HARRY FERGUSON.....HOLIDAY'S COVE
DUANE COUZENS HORMELL.....MORGANTOWN

Bachelor of Science in Engineering of Mines

GUY EDWARD GREER.....PIKEVILLE, KY.

Bachelor of Science in Agriculture

DORSEY BRANNAN.....GRAFTON
ERNEST WAYNE COFFINDAFFER.....JANE LEW
JOHN DEXTER.....MORGANTOWN
DALE HUNT HAMILTON.....MANNINGTON
JOHN OLIVER KNAPP.....MORGANTOWN
ERVIN MILTON MUSGRAVE.....MORGANTOWN
JAMES EARL ROMINE.....WEST MILFORD
CHARLES ELLSWORTH STOCKDALE.....BURTON
ROSS HOMAN TUCKWILLER.....LEWISBURG
EUGENE RAYMOND VAWTER.....ANSTED

Artist's Diploma, Voice

ELEANOR BROCK.....MORGANTOWN
MARY LIVINGSTON COLEMAN.....CLARKSBURG
ANNA IDA DALINSKY.....MORGANTOWN
LILLIAN KNIGHT GARRISON.....MORGANTOWN

Artist's Diploma, Piano

MAY ANGIE COULSON.....MORGANTOWN

Artist's Diploma, Pipe Organ and Ensemble

LUCILE GREGG WELCH.....MORGANTOWN

Teacher's Certificate, Piano

ELIZABETH BRYAN STURM.....ENTERPRISE

Teacher's Certificate, Violin

GLADYS PEARL MORGAN.....MANNINGTON
MARY BELLE PRICE.....MORGANTOWN

Teacher's Certificate, Public School Music

MARY LIVINGSTON COLEMAN.....CLARKSBURG
ANNA IDA DALINSKY.....MORGANTOWN
CLEMMA IRWIN ELDER.....MORGANTOWN
LILLIAN KNIGHT GARRISON.....MORGANTOWN
MILDRED LOWTHER.....SALEM
LUCILE VIRGINIA REED.....TERRA ALTA

PRIZES AND HONORS.

The Regents' Prize in Composition

HENRY BRINSON MONTGOMERY, *Freshman*.....CHARLESTON

The Tax Commission Prize

GEORGE WARTH TAVENNER, *Junior*.....PARKERSBURG

The Russell Love Morris Prize

LUTHER OSCAR GRIFFITH, *Senior. B.S.C.E.*.....HUNTINGTON

The American Law Book Company Prize

STANLEY BRUCE WILSON, *Third Year Law*.....MOUNDSVILLE

Phi Beta Kappa Elections

HUGH HOMER BAUMGARTNER
SALLIE EVANS
PAUL MILTON FULCHER
JULIAN LAMAR HAGEN
REX BRAMMER HERSEY
MYRA MAY NEFFLEN

ADDRESS LIST OF FACULTY AND STAFF

NOTE: The date following the name indicates the year of appointment to the present position. Where a second date is given it indicates the year of first appointment on the University staff.

Alderman, William Horace, B.S. Agr.; Professor of Horticulture and Horticulturist, Experiment Station; 1911; 184 First Street; 690W Bell.

Andrews, Edgar Lewis, B.S. Agr.; Assistant Professor of Poultry Husbandry and Assistant Poultryman, Experiment Station; 1913; .....N. Willey Street; 880M Bell.

Arkin, Aaron, Ph.D., M.D.; Professor of Pathology and Medical Bacteriology; 1913; 519 Front Street; 267 Bell.

Armstrong, Robert Allen; A.M., L.H.D.; Professor of English Language and Literature; 1903, 1893; 732 University Terrace; 698R Bell.

Arnett, Lonna Dennis; Ph.D.; Librarian; 1910; 174 First Street; 368L Bell.

Atkeson, Mary Meek, A.M.; Instructor in English; 1915, 1910; 234 Prospect Street; 889J Bell.

Atkeson, Thomas Clark, Ph.D.; Professor of Animal Husbandry, Emeritus; 1914, 1891; Buffalo, W. Va.

Atwood, Horace, M.S.Agr.; Poultryman, Experiment Station; 1916, 1897; 510 Charles Ave.; 455J Bell.

Auchter, Eugene Curtis, B.S.Agr.; Assistant Professor of Horticulture and Assistant Horticulturist, Experiment Station; 1914, 1912; 5 Collins Ferry Road; 873J Bell.

Barbe, Waitman, A.M., Litt.D.; Director of the Summer School and Professor of English; 1910, 1895; Peabody Hotel.

Bear, Firman Edward, M.S.; Consulting Soils Chemist, Experiment Station; 1916; Columbus, Ohio.

Berg, Anthony, B.S.; Assistant Plant Pathologist, Experiment Station; 1913; 618 Spruce Street, 364R Bell.

Bergy, Gordon Alger, Ph.C., M.S.; Instructor in Pharmacy; 1916; 506 High Street; 364J Bell.

Bishop, Charles Edward, Ph.D.; Professor of Greek Language and Literature; 1911; 148 McLane Ave.; 122X National.

Bishop, Ernest Edward; Student Assistant in Bacteriology and Pathology; 1916; 148 McLane Ave.; 122X National.

Black, Louis, Director of the School of Music; 1909; 253 McLane Ave.; 495 Bell.

Boghosian, Leon Hovsep; Student Assistant in Electrical Construction; 1916; 48 University Driveway; 68R2 National.

Bonar, Martin Loxley, M.S.; Bacteriologist, State Hygienic Laboratory; 1915; 175 First Street.

Boughner, Jennie DeLawder, A.B.; Assistant Librarian; 1915; 392 Willey Street; 207J Bell.

Bourquin, Julius Jay, B.S.; Assistant Professor of Mining Extension; 1916, 1915; Montgomery, W. Va.

Brannan, Dorsey, B.S. Agr.; Student Assistant in Zoology; 1917; 692 N. High Street; 648J Bell.

Brewster, Frank McCain; Student Assistant in Forging; 1916; 106 High Street; 403R Bell.

Bristol, Lucius Moody, Ph.D.; Assistant Professor of Sociology; 1915; 6 Brockway Ave.; 127J Bell.

Brooks, Alonzo Beecher, B.S. Agr.; Forester, Experiment Station; 1915; 394 Willey Street; 64R Bell.

Brown, Robert George; Ph.C., B.S.; Instructor in Pharmacy; 1917; 506 High Street; 364J Bell.

Brown, Samuel Boardman, A.M.; Professor of Geology and Mineralogy; 1892; 1890; 640 High Street; 364R National.

Buchanan, Margaret, A.B.; Instructor in Mathematics; 1915, 1908; 15 Cobun Ave.; 63 Bell.

Burke, George Wilbur, B.S.; Assistant Chemist of the Experiment Station; 1916; 120 Park Street; 283M Bell.

Butterfield, Frederic Curtis, A.B.; Head of Piano Department; 1913; 324 Willey Street; 280M Bell.

Callahan, James Morton, Ph.D.; Professor of History and Political Science and Dean of the College of Arts and Sciences; 1916, 1902; 136 Willey Street; 586J Bell.

Cannaday, Charles Benton, A.M.; Professor of Latin; 1916, 1914; 12 Hagan's Ave.; 301R Bell.

Carlin, Leo, A.B., LL.B.; Assistant Professor of Law; 1916; 1 Watts Street; 73R Bell.

Carroll, Alan Keyser; Student Assistant in Dairy Husbandry; 1917; 118 Willey Street; 120J Bell.

Cather, Carl Henry, B.S.M.E.; Instructor in Mechanical Drawing; 1916; 257 McLane Ave.; 528X National.

Cave, Harry Winfield, M.S. Agr.; Instructor in Dairy Husbandry, Agricultural Extension Staff; 1916; 118 Willey Street; 120J Bell.

Chez, Louise Ferris; Director of Women's Gymnasium; 1916, 1904; 324 Willey Street; 280M Bell.

Chitwood, Oliver Perry, Ph.D.; Professor of European History; 1907; 312 Park Street; 785R Bell.

Church, Edwin Fayette, Jr., M.S.; Professor of Machine Design and Construction; 1911, 1904; 336 Park Street; 214X National.

Clark, Friend Ebenezer, Ph.D.; Professor of Chemistry; 1914; 649 Spruce Street; 830J Bell.

Clark, Mabel Lee, A.B., B.L.S.; Assistant Librarian; 1913; 230 Willey Street.

Cody, Stuart Alverton; Assistant Poultry Club Agent, Agricultural Extension Staff; 1916; 155 Willey Street; 833J Bell.

Cokeley, Harlin Rex; Instructor in Animal Husbandry and Assistant Husbandryman, Experiment Station; 1917; 80 S. High Street; 865R Bell.

Colwell, Rachel Hartshorn, B.S., M.A.; Associate Professor of Home Economics; 1910; 647 Spruce Street; 71J Bell.

Cook, Alton Aldrich, S.B.; Chemist, State Hygienic Laboratory; 1916; 221 Willey Street; 3 Bell.

Cook, Isaac Scott, Jr., B.S. Agr.; Consulting Agronomist, Experiment Station; 1916; Wheeling, W. Va.

Cooper, George Spencer, Jr.; Student Assistant in Chemistry; 1916; 506 High Street; 364J Bell.

Coulter, John Lee, Ph.D.; Dean of the College of Agriculture and Director of the Experiment Station; 1915; 484 Grand Street; 450R Bell.

Cox, John Harrington, A.M.; Professor of English Philology; 1904, 1902; 188 Spruce Street; 192J Bell.

Crane, Harley Lucius, B.S. Agr.; Instructor in Horticulture; 1914; 757 N. Front Street; 692W Bell.

Crow, Charles Sumner, A.M.; Assistant Professor of Education (Extension Work); 1916, 1913; Moundsville, W. Va.

Dacy, Arthur Lincoln, B.S.; Associate Professor of Horticulture and Associate Horticulturist, Experiment Station; 1912; 28 Buckhannon Ave.; 485J Bell.

Dadisman, Andrew Jackson, M.S. Agr.; Associate Professor of Rural Economics and Farm Management and Assistant in Farm Management, Experiment Station; 1916; 118 Willey Street; 120J Bell.

Darby, Arleigh Lee, A.M.; Associate Professor of Romance Languages; 1915; 1910; 487 High Street.

Davis, Roland Parker, M.C.E., Ph.D.; Professor of Structural and Hydraulic Engineering; 1912, 1911; 16 Demain Ave.; 263J Bell.

Deahl, Jasper Newton, Ph.D.; Professor of Education; 1901; 414 Park Street; 278J National

Dorsey, Henry, M.S. Agr.; Instructor in Agronomy; 1914; 62 Beverly Ave.; 685J Bell.

Dustman, Robert Barclay, B.S. Agr.; Instructor in Agronomy, Agricultural Extension Staff; 1916; 9 Maryland Street; 716J National.

Eiesland, John Arndt, Ph.D.; Professor of Mathematics; 1907; 23 Demain Ave.

Emory, Frederick Lincoln, B.S., M.M.E.; Professor of Mechanics and Applied Mathematics; 1897, 1891; 156 Foundry Street; 86R National.

Ezell, Belton Bonner, B.S. Agr.; Assistant State Agent, Agricultural Extension Staff; 1914; Charleston, W. Va.

Fisher, Robert Waldorf, M.D.; Instructor in Physical Diagnosis; 1913; Price Building; 594L National, 575R Bell.

Forman, Alexander Hardie, E.E., M.M.E., Ph.D.; Professor of Electrical Engineering; 1916, 1913; 6 Demain Ave.; 304J Bell.

Frazier, Lester Elwin; Student Assistant in Chemistry; 1915; Woodburn; 378M Bell.

Frame, Nat Terry, A.B.; State Agent in charge of County Agency Work, Agricultural Extension Staff; 1914; 247 Fife Ave.; 830J Bell.

Freeman, Hubert Milo, A.B.; Instructor in Physics; 1915; 50 Jones Ave.; 673J Bell.

Friend, Lloyd Lowndes, A.M.; Professor of Secondary Education; 1910, 1897; Charleston, W. Va.

*Giddings, Nahum James, M.S.; Plant Pathologist, Experiment Station; 1908; 36 University Driveway.

Gilbert, Donald Monroe, Ph.B.; Instructor in Romance Languages; 1915; 749 N. Front Street; 311R Bell.

Glass, Edgar Curran; Assistant Law Librarian; 1916; 1 S. Walnut Street; 22J Bell.

Grantham, James, M.A.; Instructor in German; 1915; 504 High Street; 284J Bell.

Gray, Alexander Bell, B.S. in Mining; Assistant Professor of Mining Extension; 1916; Logan, W. Va.

Grow, George Walter, B.S.M.E., M.S.; Instructor in Machine Design and Construction; 1914, 1912; 211 Wells Street.

*On leave of absence until September 1, 1917.

Grumbein, John Behny, M.M.E.; Professor of Steam and Experimental Engineering; 1916, 1903; 195 Grant Ave.; 881J Bell.

Guseman, Sadie Rae, B.S.; Assistant in Home Economics in charge of Girls' Club Work, Agricultural Extension Staff; 1913; 42 Stewart Street.

Guseman, Virginia Ruthe; Student Assistant in Home Economics; 1916; 42 Stewart Street.

Hall, Arthur Adams, B.S.M.E.; Assistant Professor of Electrical Engineering; 1916; 379 Front Street; 239R Bell.

Hagen, Julian Lamar, A.B.; Student Assistant in History; 1916; 670 N. High Street; 228J Bell.

Hardman, Thomas Porter, M.A., LL.B., Jur.Dr.; Associate Professor of Law; 1915, 1913; 136 High Street; 431R Bell, 71J National.

Hardy, Irvin, M.D.; Instructor in Minor Surgery; 1912; City Hospital; 629J Bell.

Hare, Alfred Jarrett, A.M.; Professor of Latin, and Secretary and Registrar of the University; 1898, 1889; 411 High Street; 361J Bell.

Hart, Simeon Thompson, B.S.M.E.; Assistant Professor of Machine Construction and Superintendent of Shops; 1915; 234 Jackson Ave.

Hartley, Charles Henry, B.S.; Assistant Director of Agricultural Extension; 1914; 120 Beverly Ave.; 247J Bell.

Hawkins, Paul Minor; Student Assistant in Horticulture; 1916; 205 Gordon Street.

Hayes, Flora Ray, A.B.; Instructor in Theory and History of Music; 1910; 480 High Street; 348R Bell.

Hepworth, Marion Martha, B.S.; Associate Professor of Home Economics, Agricultural Extension Staff; 1916; 591 Spruce Street; 385L Bell.

Hersey, Rexford Brammer, A.B.; Secretary of Young Men's Christian Association; 1916; 205 Willey Street; 316R National.

Hervey, Mary Amanda; Student Assistant in Library; 1915; 247 Willey Street; 258 Bell.

Higby, Chester Penn, A.M.; Instructor in History; 1916; 334 Park Street; 545J Bell.

Hill, Hubert, M.S.; Assistant Professor of Chemistry; 1916, 1910; 45 Stewart Street; 117R Bell.

Hite, Bert Holmes, M.S.; Chief Chemist, Experiment Station, and Professor of Agricultural Chemistry; 1895; Hotel Peabody.

Hodgson, Joseph Ellis, Ph.D.; Professor of Mathematics; 1913, 1912; 209 Grant Ave.; 254R Bell.

Horne, Margaret Winton; Instructor in Violin; 1909; 647 Spruce Street; 71J Bell.

Howard, David Clyde, A.M., LL.B.; Associate Professor of Law; 1916, 1914; 36 University Driveway; 235M Bell.

Hunt, Harrison Randall, Ph.D.; Instructor in Zoology; 1916; 162 First Street.

Johnson, David Dale, A.M.; Associate Professor of English; 1914, 1902; 305 Fayette Street; 141J Bell.

Johnston, John Charles; Secretary to the Dean of the College of Agriculture; 1914; 151 McLane Ave.; 566J Bell.

Jones, Clement Ross, M.E., M.M.E.; Dean of the College of Engineering and Professor of Steam and Experimental Engineering; 1911, 1895; 262 McLane Ave.; 717R Bell.

Jones, Henry Craig, A.B., LL.B.; Professor of Law and Dean of the College of Law; 1914; 206 Grant Ave.; 779R Bell.

†Kemp, William Beck, B.S.; Instructor in Agronomy and Assistant Agronomist, Experiment Station; 1913; 747 Front Street.

Kendrick, William Henry, A.B.; State Boys' Club Agent, Agricultural Extension Staff; 1913; 144 Pleasants Street; 334J Bell.

Kennedy, James Edward, A.B.; Assistant Law Librarian; 1915; 480 Spruce Street; 124R Bell.

*King, Benjamin Walter, A.B.; Assistant Professor of Economics; Cambridge, Mass.

King, Edgar Blaine; Instructor in Mining Extension; 1916; Beckley, W. Va.

Kimble, Brison Edward; Student Assistant in Physics; 1916; 23 Overhill Street; 895J Bell.

Knabenshue, Brace Sloan; Student Assistant in Chemistry; 1916; 1913; 670 High Street; 228J Bell.

Knapp, Forrest Dunbar; Student Assistant in Library; 1916; 518 University Driveway; 894J Bell.

Knight, Lee Irving, Ph.D.; Plant Physiologist, Experiment Station; 1913; 205 Gordon Street; 481R Bell.

Krak, Jan Hendrick Berghius-, B.S.; Assistant Chemist, Experiment Station; 1908; 220 Grant Ave.; 171J Bell.

Kunst, Frank Batson, A.B.; Assistant Chemist, Experiment Station; 1901; Garlow Building.

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†Resigned, December 1, 1916.
*On leave of absence, 1915-1917.

Laubach, James Howard, First Lieutenant, Infantry, U. S. Army; Commandant of Cadets and Professor of Military Science and Tactics; 1916; 115 Wagner Road; 244R Bell.

Legge, Withrow Reynolds, M.S.; Instructor in Horticulture, Agricultural Extension Staff; 1916; 457 High Street.

Leuder, Charles Augustus, D.V.M.; Associate Professor of Veterinary Science; 1912, 1908; 752 N. Front Street; 804R Bell.

McIlvaine, Theodore Clinton, B.S. Agr., M.S.; Instructor in Agronomy and Assistant Agronomist, Experiment Station; 1917; 732 University Terrace; 698R Bell.

Mack, Edward, Jr., Ph.D.; Instructor in Chemistry; 1915; 649 Spruce Street; 830R Bell.

Martin, Joseph Ami; Superintendent of Buildings and Grounds; 1916; 282 Fayette Street; 497R National.

Marshall, Ralph Sherman, B.S.; Secretary to the Dean of the College of Engineering; 1911; 91 Beverly Ave.; 716J Bell.

Marshall, Genevieve Elliott; Assistant in Voice; 1916, 1914; 91 Beverly Ave.; 716J Bell.

May, George Wilton, Ordnance Sergeant, U. S. Army, Retired; Assistant Commandant and Supply Officer, Military Division; 1912, 1912; 628 Spruce Street; 731J Bell.

Mestrezat, Walter Alexander; Chief Musician, Cadet Corps, and Instructor in Band Music; 1901; 57 Bridge Street; 274R National.

Moist, Ronald Farrow, A.B.; Secretary to the Dean of the College of Law; 1915; 105 Alexandria Ave.; 620J Bell.

Moon, Charles, B.S.C.E.; Instructor in Physics; 1916; 86 Green Street; 6J Bell.

Moore, Susan Maxwell, A.B.; Dean of Women and Instructor in Piano; 1903; 247 Willey Street; 258 Bell, 678L National.

Morris, Russell Love, B.S.C.E.; Professor of Railway and Highway Engineering; 1895; 294 Grand Street; 860R Bell.

Morris, Samuel, M.A.; Instructor in Chemistry; 1916; 221 Willey Street; 3 Bell.

Morris, Samuel John, M.D.; Assistant Professor of Anatomy; 1912; 83 Kingwood Street; 696J Bell.

Neil, Charles Edmund, A.M.; Professor of Public Speaking; 1903; 239 Spruce Street; 641R Bell.

Nelson, Max Carleton; Assistant in Drawing; 1916; 53 Martin Street; 73J Bell.

Nuzum, Callie Congie, B.S.; Assistant in Home Economics; 1916, 1914; 722 N. Front Street; 151R Bell

O'Connor, Robert Emmett, A.B.; Assistant Law Librarian; 1916; 147 Fayette Street; 345R Bell.

Oliver, Mary Bertha, B.S.; Instructor in Home Economics; 1912; 220 Prospect Street; 184R Bell.

Osborn, George Morris, B.S.C.E.; Instructor in Sanitary Engineering and Surveying; 1915, 1913; 519 Front Street; 267 Bell.

Patch, Roland Harrison, M.S.; Instructor in Horticulture and Assistant Horticulturist, Experiment Station; 1917; 54 University Driveway.

*Peairs, Leonard Marion, B.S.Agr., M.S.; Professor of Entomology and Research Entomologist, Experiment Station; 1913, 1912; Chicago, Ill.

Perdue, Daniel Henry; Instructor in Mining Extension; 1915; Bluefield, W. Va.

Pollock, Rebecca Luella, A.M.; Instructor in English; 1916; 542 Spruce Street; 258 Bell.

Price William Armstrong, Jr., Ph.D.; Assistant Professor of Geology; 1914, 1913; 510 High Street; 889R Bell.

Purinton, Daniel Boardman, Ph.D., LL.D.; President and Professor of Philosophy, Emeritus; 1911, 1873; 89 Grandview Ave.; 259J Bell.

Pyle, George Edmondson; Assistant Professor of Physical Education; 1917, 1914; 540 Spruce Street; 870J Bell.

Reese, Albert Moore, Ph.D.; Professor of Zoology; 1907; 8 Waitman Street; 149J National.

Reese, Charles A., B.S.; Instructor in Entomology; 1917; 574 McLane Ave.; 557J Bell.

Rhea, William Allen, M.S. Agr.; Instructor in Dairy Husbandry; 1916; 747 N. Front Street.

†Rogers, Charles Herbert, Ph.C., M.S.; Associate Professor of Pharmacy; 1916, 1914; 12 Willey Driveway; 59 Bell.

Rumsey, William Earl, B.S. Agr.; State Entomologist, Experiment Station; 1893; 415 Park Street; 547R National.

Salter, Robert Mills, M.S.; Instructor in Soils and Soils Chemist, Experiment Station; 1916, 1915; 9 Maryland Street; 716J National.

Sarle, Charles Faye, B.S.; Assistant in Farm Management; 1916; 456 Front Street; 249R National.

Satterfield, Russell Layman; Student Assistant in Chemistry; 1915; 95 Beverly Ave.; 146L National.

Scherffius, Cleveland Hendricks; in charge of Tobacco Investigation, Experiment Station; 1913; Guyandotte, W. Va.

Schultz, William Henry, Ph.D.; Professor of Pharmacology and Materia Medica; 1913; 724 N. Front Street; 804J Bell.

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*On leave of absence until September 1, 1917.
†Resigned, February 1, 1917.

Seaman, Raymer Egbert; Instructor in Woodworking and Foundry Practice; 1912; 86 Washington Street; 784J Bell.

Sheets, Earl Wooddell, B.S. Agr., M.S.; Professor of Animal Husbandry; 1913, 1912; 234 Prospect Street; 889J Bell.

Sheldon, John Lewis, Ph.D.; Professor of Botany; 1913, 1903; 299 Grand Street; 368L National.

Shunk, Ivan Vaughan Detweiler, A.M.; Instructor in Botany; 1916; 53 Carson Street.

Simonton, James Wiggins, A.B., J.D.; Associate Professor of Law; 1915, 1914; 340 Willey Street; 213R Bell.

Simpson, John Nathan, M.D.; Dean of the School of Medicine, Professor of Physiology, and Director of Hygienic Laboratory; 14 Willey Driveway; 1912, 1902; 244J Bell.

Smith, Simeon Conant, A.M.; Associate Professor of Rhetoric; 1914, 1899; 174 High Street; 234R Bell.

Snarr, Otto Welton; Student Assistant in Zoology; 1916; 52 University Driveway; 737J Bell.

Snee, Grace Martin; Instructor in Piano and Pipe Organ; 1903, 1898; 282 Fayette Street; 497R National.

Spangler, Robert Clifton, A.M.; Instructor in Botany; 1914, 1912; 250 First Street.

Stansbury, Harry Adams, B.S.; Director of Athletics; 1917; 12 Willey Driveway; 59 Bell.

Stathers, Madison, Ph.D.; Professor of Romance Languages; 1910, 1906; 288 Grand Street; 686J Bell.

Steele, Asa George; Ph.D.; LL.D.; Associate Professor of Education; 1916; 201 Jackson Ave.; 681R Bell.

Stemple, Forrest Wilbur, A.B., M.S.; Associate Professor of Agronomy; 1916; 63 Kingwood Street; 22R Bell.

Stewart, James Scott, M.S.; Professor of Mathematics, Emeritus; 1907, 1877; 146 Willey Street; 120R Bell.

Stockdale, Charles Ellsworth, B.S. Agr.; Agricultural Editor; 1916; 326 Jefferson Street.

Strickland, Francis Lorette, Ph.D.; Professor of Philosophy; 1915; 615 Grand Street.

Sutton, Luther Francis, B.S. Agr.; Assistant Horticulturist, Experiment Station, and Superintendent of Reymann Memorial Experiment Farm; 1917, 1912; 258 McLane Ave.; 881R Bell.

*Swift, Aubrey Judson, M.S.; Instructor in Animal Husbandry; 1915; 9 Pennsylvania Ave.; 358R Bell.

*Resigned, January 31, 1917.

Templeton, Howard Johnson; Student Assistant in Chemistry; 1914; 52 University Driveway; 797J Bell.

Thorn, Merrill Hale; Student Assistant in Mathematics; 1916; 250 First Street.

Titlow, Calvin R., Director of Agricultural Extension; 1912; 100 Beverly Ave.; 555J Bell.

Trotter, Frank Butler, LL.D.; President; 1916, 1907; 549 Front Street; 151J Bell.

Trotter, James Russell, LL.B., A.M.; 1908; 15 DeMain Ave.; 347J National.

Truscott, Frederick Wilson, Ph.D.; Professor of Germanic Languages and Literature; 1899, 1897; 34 University Driveway; 59R National.

Tuckwiller, Eugene Anthony, B.S. Agr.; Specialist in Animal Husbandry, Agricultural Extension Staff; 1916, 1915; 220 Prospect Street; 184R Bell.

Tuckwiller, Ross Homan, B.S. Agr.; Assistant in Beef Cattle Investigations, Experiment Station; 1916; Lewisburg, W. Va.

Vandervort, Hu Swisher, B.S. Agr.; Assistant State Agent, Agricultural Extension Staff; 1915, 1912; 51 Maple Ave.; 490L National

Vickers, Enoch Howard, A.M.; Professor of Economics and Sociology; 1910; 748 University Terrace; 692J Bell.

Waggoner, Chauncey William, Ph.D., Professor of Physics; 1909; 730 University Terrace; 29R Bell.

Weakley, Charles Edward, Jr.; Assistant Chemist, Experiment Station; 1907; Peabody Hotel.

Weimer, Bernal Robinson, A.B.; Student Assistant in Zoology; 1916; 257 McLane Ave.; 528X National.

Wells, Clarence Floyd, A.B.; Assistant Soils Chemist, Experiment Station; 1916; 207 Fife Ave.

Wells, Ernest Blaine; Student Assistant in Soil Chemistry; 1916; 207 Fife Ave.

West, Rufus Asa; Instructor in Metal Working and Stationary Engineer; 1913, 1892; 181 First Street; 132J National.

White, William James; Financial Secretary; 1901, 1897; 201 Marion Ave.; 328J Bell.

Whitehill, Alexander Reid, Ph.D.; Professor of Chemistry; 1885; Prairie Ave. and Wagner Road; 699 Bell.

Wiecking, Hermine; Instructor in Public School Music; 1914; 727 Front Street; 526J Bell.

Willey, William Patrick, A.M.; Professor of Equity, Jurisprudence and Commercial Law, Emeritus; 1912, 1883; 250 Pleasants Street, 150M Bell.

Williams, Alexander Dennis; Chief Engineer of State Road Bureau; 1913; 471 High Street; 55J Bell.

Willis, Dennis Martin, A.B., LL.M.; Assistant Professor of Economics; 1915, 1895; 212 Park Street; 560 National.

Winkler, Charles Herman, Ph.D.; Assistant Professor of Agricultural Education; 1916; 88 Kingwood Street; 496J National.

Yoke, John Jonathan, B.S. Agr.; Assistant Professor of Animal Husbandry, and Assistant in Animal Husbandry, Experiment Station; 1915; 580 Spruce Street.

Zern, Edward Nathan, B.S.; Professor of Mining Engineering; 1912; 351 South Walnut Street; 362R Bell.

Zinn, Elsie Gay, B.S. H.E.; Assistant in Home Economics Extension Work; 1917;

LIST OF STUDENTS

STUDENTS ENROLLED IN THE COLLEGES.

NOTE.—The following list includes the names of all students enrolled in the various colleges of the University, arranged in alphabetical order. Following each student's name and address are given his class, course of study which he is pursuing, or the degree for which he is a candidate. The word freshman, sophomore, etc., following the student's name indicates his rank on the first day of November, 1916. Regular students in the College of Law have the following standing in the University: first-year students, sophomore; second-year students, junior; third-year students, senior; except those holding a bachelor's degree. Students whose names are marked with an asterisk (*) are ranked as freshmen, but are conditioned in one or more preparatory subjects. Students marked as sub-freshmen or special students are classified in accordance with the regulations found on page 34 of this Catalogue. Students enrolled in the Division of Military Science are designated by a (c) following the name.

*Abshire, James Dewey (c)	Beckley	Fr., A.B.
Ackermann, Maximilian Joseph	Wheeling	1st. Year Med.
Ahrens, Charles Boger (c)	Wheeling	Fr. A.B.
Akins, John Russell (c)	Hundred	Fr., B.S.C.E.
*Alderson, Ida Lee	Summersville	Fr., A.B.
Alger, Kathryn	Wheeling	Sen., B.S. Agr.
A.B. West Virginia University, 1916.		
*Allen, Carl Beaty (c)	Moorefield	Fr., A.B.
Allen, Robert Ethan (c)	Morgantown	Jun., B.S. Agr.
Allman, John Isaac	Jane Lew	Sen. B.S.Agr.
Ammons, Nellie Perrel	Rice's Landing, Pa.	Sen., A.B.
Amos, Paul Emery (c)	Fairmont	Fr., A.B.
Anderson, Effie Katherine	Mannington	Fr., A.B.
Anderson, Grace Pearl	Wheeling	Fr., A.B.
Anderson, Harry James (c)	Mannington	Soph., B.S.Agr.
Anderson, James Lee	Littleton	Fr., A.B.
Anderson, Lane Schofield (c)	Charleston	Fr., A.B.
Andrews, Edward Cornelius (c)	Morgantown	Special A. & S.
Angelo, Ernest (c)	Parsons	Soph., B.S.Agr.
Ankrom, Leslie (c)	New Martinsville	Sen., B.S.Agr.
Archdeacon, William Mathew (c)	Grafton	Soph., A.B.
Armstrong, Norman McKelvy	Pittsburgh, Pa.	Fr., B.S.Agr.
Armstrong, Robert Harman (c)	Alaska	Jun., A.B.
Arnett, Harold Ivanhoe (c)	Rivesville	Fr., A.B.
Arnold, Edna	Weston	Jun., A.B.
Arnold, Orva Joyce	Morgantown	Soph., B.S.Agr.
Ash, Ray (c)	West Union	Jun., A.B.
Ash, Roy Fillmore (c)	Clarksburg	Soph., B.S.E.E.
Atkinson, Nathaniel Peabody (c)	Elm Grove	Soph., B.S.Agr.
Ayers, George Raymond	Barboursville	3d. Yr. Law
Ayers, Joseph Allen	Cass	Sen., A.B.

Bacon, John Guernsey (c)	Charleston	Special Phar.
*Bailey, Claire Burns	Brush Fork	Fr., A.B.
Bailey, George Silas (c)	Grafton	Fr., B.S.C.E.
Bailey, Harvey Clarke	Glenville	Soph., A.B.
Bailey, Lilian	Brush Fork	Fr., A.B.
Bailey, Minor Wiley	McComas	Fr., A.B.
Bailey, Russell Brooks (c)	Weston	Soph., A.B.
Bailey, Ruth	Parkersburg	Fr., A.B.
Bailey, Sebie	Buckhannon	Grad., A. & S.
Bailey, Grace Elliott	Morgantown	Soph., A.B.
Baker, Lucy Ellen	Morgantown	Jun., A.B.
Baldwin, Mary Edith	Wheeling	Fr., A.B.
Ball, Eugene Benton (c)	Spencer	Fr., B.S.M.E.
Barbe, Leslie Arthur	Mapletown, Pa.	Sen., A.B.
Barber, Columbus Shannon (c)	Clay	Fr., B.S.E.E.
Barber, Daniel Newman (c)	Charleston	Soph., A.B.
Barlow, Ralph Lawrence (c)	Beverly	Jun. B.S.Agr.
Barnes, Homer Francis (c)	Fairmont	Sen., A.B.
Barnes, Sarah Alice	Bruceton Mills	Special A. & S.
Barnhart, Alvin Johnson	Winfield	Special Law
Barnhart, Leroy Richardson	Morgantown	Fr.,A.B.
Barns, Bernie Hodges	Morgantown	Special A. & S.
Barns, Helen Virginia	Morgantown	Fr., A.B.
Barrett, Harold James (c)	Mannington	Soph., A.B.
Bartlett, Archie Rupert (c)	Grafton	Fr., B.S. Agr.
Batten, Beryl	Morgantown	Soph., A.B.
Batten, Ruth	Morgantown	Soph., A.B.
Beard, Henry Washington (c)	Hillsboro	Jun., B.S.Agr.
Beaumont, John Herbert	Morgantown	Sen., B.S.Agr.
Beck, Gladys Geneva	New Geneva, Pa.	Fr., A.B.
Beeghley, Jesse Wirt (c)	Weston	Fr., B.S.Agr.
Bell, Jesse Homer	Auburn	Jun., A.B.
Bell, Roy Austin (c)	Shepherdstown	Fr., A.B.
Bennett, Edward Clinton (c)	Morgantown	Jun., B.S.C.E.
Bent, Laura Gertrude	Elkins	Soph., A.B.
Berg, Anthony	Morgantown	Grad., A. & S.
B.S. University of Wisconsin, 1912.		
*Berg, Hilda Jean	Point Marion, Pa.	Fr., A.B.
Berghuis-Krak, Jan Hendrick	Morgantown	Grad., A. & S.
Berisford, Halley Earl	Captina	Sen., A.B.
Berry, Rachel Rose	Heaters	Soph., B.S.Agr.
Berry, Rebecca Elizabeth	Sutton	Sen. A.B.
*Best, Harry Lee, Jr. (c)	Davis	Fr., B.S.E.E.
Bibbee, Carl Roush (c)	Hanna	Fr., B.S.Agr.
Bibbee, Paul Cecil (c)	Hanna	Fr., B.S.Agr.
Bickel, Charles Russell (c)	Parkersburg	Fr., B.S.C.E.
Bierer, Edward (c)	Morgantown	Fr., A.B.
Bing, Arma Eudora	Elkins	Soph., A.B.
Bird, Grace	Martinsburg	Fr., A.B.
Bishop, Carter Richard	Morgantown	Jun., A.B.
Bishop, Charles Eric (c)	Morgantown	Grad., A. & S
A.B. West Virginia University, 1914.		
Bishop, Ernest Edward	Morgantown	Sen. B.S.
Bishop, Frederic Dewey (c)	Morgantown	Soph. A.B.

Bjornson, Edwin (c)	Morgantown	Soph., B.S.M.E.
Black, Frederick Wilbur (c)	Bluefield	Fr., B.S.Agr.
Blankenship, David Alderson	Beckley	Special Law
*Bloyd, Joseph Elmer, Jr. (c)	Moundsville	Fr., Ph.G.
Bobbitt, William Chilton	Cowen	1st. Yr. Law
Boghosian, Leon Hovsep	Teheran, Persia	Jun. B.S.M.E.
Bonar, Ethel Casto	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1915.		
Bonar, Martin Loxley	Morgantown	Grad., A. & S. and 2nd. Yr. Med.
B.S. West Virginia University, 1913; M.S. *Ibid.*, 1915.		
Bonnesen, Edith Marie	Wheeling	Fr., A.B.
Boone, Io Margaret	Ronceverte	Soph., A.B.
Boone, William Harry (c)	Ronceverte	Grad., A. & S. and 2nd. Yr. Med.
Boreman, Herbert Stephenson (c)	Middlebourne	1st. Yr. Law
Bosley, Thomas Richard	New Creek	Fr., A.B.
Bottome, Sterling Bodine (c)	Moundsville	Fr., A.B.
Bower, Mary Mildred	Morgantown	Sen., A.B.
Bowie, Allen Davis (c)	Wheeling	2nd. Yr. Law
Bowman, Harvey Bird (c)	Wheeling	Fr., B.S.Agr.
Boyd, Joseph Henry (c)	Colliers	Jun., B.S.Agr.
Bradley, Frederick Arthur	Grafton	Jun., B.S.Agr.
Bradley, Jessie Beryl	Grafton	Jun., A.B.
Bradshaw, Lucile Jean	Logan	Fr., A.B.
*Brady, Thomas McGraw (c)	Clarksburg	Fr., B.S.M.E.
Brady, Troy Arden	French Creek	Soph., A.B.
Brand, Linnie	Morgantown	Soph., A.B.
Brannan, Dorsey (c)	Grafton	Grad., A. & S.
B.S. Agr. West Virginia University, 1916.		
Brannan, John Earl	Grafton	Soph., A.B.
Brannon, Linn Mapel (c)	Weston	Fr., A.B.
Brewster, Frank McCain (c)	Morgantown	Sen., B.S.M.E.
Brewster, Pauline	Morgantown	Jun., A.B.
Briers, Eugene Hume (c)	Bellepoint	Sen., B.S.E.E.
Broadwater, Blanche Dale	Belington	Fr., A.B.
Broadwater, Theodore Verne (c)	Belington	Soph., A.B.
Brock, Robert Luther (c)	Morgantown	Jun., A.B.
*Brodoski, Nathan (c)	Brooklyn, N. Y.	Soph., B.S.C.E.
Brooks, Allan Arthur (c)	Buckhannon	Jun., B.S.Agr.
Brooks, Florence Marian	Buckhannon	Soph., B.S. in H.E.
Brown, Abraham	Philadelphia Pa.	Fr., A.B.
Brown, Arthur Jay	Morgantown	2nd. Yr. Ph.G.
Brown, Helen Scott	Morgantown	Sen., A.B.
Brown, Nelle Gail	Morgantown	Fr., A.B.
Brown, Olive	Grafton	Soph., A.B.
Brown, Philip Edward (c)	Morgantown	2nd. Yr. Law
Brown, Ross Duncan (c)	Morgantown	Fr., B.S.E.E.
Brown, Virginia	Morgantown	Soph., A.B.
Browning, James Rinard (c)	Morgantown	Fr., B.S.Agr.
Browning, Kathryn Sylvia	Morgantown	Soph., B.S. in H.E.
Bruner, Roy William (c)	Wellsburg	Jun., B.S.M.E.
Brunetti, Mendor Thomas (c)	Curwensville, Pa.	1st. Yr. Law
Buchanan, Margaret	Morgantown	Grad. A. & S.
A.B. West Virginia University, 1906.		

Buckner, Anne Byrne	Charleston	Fr., A.B.
Burdette, Everett Daniel (c)	Ronceverte	Jun., B.S.Agr.
Burdette, William Leps (c)	Lewisburg	Soph., B.S.M.E.
*Burke, Frank	Clarksburg	Fr., A.B.
Burke, George Wilbur	Concord, N. H.	Grad., A. & S.
B.S. New Hampshire College, 1916.		
Burley, Ova Milton (c)	Davis	Soph., A.B.
Burley, William James (c)	Moundsville	Fr., A.B.
Burns, James Francis (c)	Fairmont	Fr., A.B.
Busch, Everett (c)	Clarksburg	Jun., B.S.Agr.
*Bush, Theodore Frederick (c)	Grafton	Fr., A.B.
Bussard, Agnes Marguerite	Harpers Ferry	Fr., A.B.
Butler, Stanley Cornelius (c)	Huntington	Soph., B.S.E.E.
Caceres, Santiago Benito	Humacao, P. R.	Soph., A.B.
Cady, Stanton Holme	Morgantown	Sen., A.B.
Cain, Harry E.	Clarksburg	Soph., B.S.M.E.
Cain, Jasper Myers	Red House	Special Law
*Campbell, Albert Lee (c)	Morgantown	Fr., A.B.
Campbell, Clinton Rearick	Wheeling	Special Law
Campbell, Fletcher Young	Louisville, Ky.	Fr., B.S.Agr.
Campbell, Hazel Elizabeth	Davis	Soph., A.B.
Caramella, John Joseph (c)	Clarksburg	Fr., B.S.Agr.
Carden, William Jackson (c)	Weston	Fr., A.B.
Carle, Helen Mary	Wheeling	Jun., A.B.
Carman, Oliver Orlando	Morgantown	Special Eng'g.
Carney, Dorothy	Charleston	Soph., A.B.
Carpenter, Lewis Van (c)	Benwood	Sen., B.S.C.E.
Carroll, Alan Keyser (c)	Masontown	Jun., B.S.Agr.
Casto, Edna Lenore	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1915.		
Caudy, Fred McCauley (c)	Weston	Soph., B.S.E.E.
Cavendish, Fred Clinton	Leander	Soph., A.B.
Cawley, Anna Agnes	Sistersville	Fr., A.B.
Chambers, Vannetta	Martinsburg	Soph., A.B.
Champe, Ira Preston, Jr.	Charleston	Fr., A.B.
Chancellor, Charles William (c)	Parkersburg	Soph., B.S.Agr.
Chancellor, Victor Fleming (c)	Parkersburg	Soph., B.S.Agr.
Chandler, Hudson (c)	St. Albans	Fr., B.S.E.E.
Chenoweth, Fred Myer (c)	Philippi	Soph., A.B.
Chernilowski, Sam	Newford, N. Y.	Special A. & S.
Chez, Louise Ferris	Morgantown	Special A. & S.
Christopher, David Alfred (c)	Morgantown	Jun., A.B.
Clapham, Roger Everhart	Martinsburg	Fr., A.B.
*Clark, Alnah Bernard (c)	Bramwell	Fr., A.B.
Clark, Mabel	Salem, Ohio	Grad., A. & S.
Clark, Mary Eloise	New Martinsville	Fr., A.B.
Clark, Nancy Dorothy	Sistersville	Fr., A.B.
Cobun, Miles Lincoln (c)	Morgantown	Fr., A.B.
Cochran, Anagrace Bell	Dawson, Pa.	Fr., A.B.
Cochran, Philip James	Dawson, Pa.	Fr., A.B.
Cogar, Beatrice Elizabeth	Webster Springs	Fr., B.S. in H.E.
Cokeley, Addie May	Pennsboro	Sen., B.S. in H.E.
Cokeley, Annie Lena	Pennsboro	Sen., B.S. in H.E.

Cokeley, Harlin Rex	Harrisville	Sen., B.S.Agr.
Colcord, Tristram Coffin (c)	St. Albans	Soph., B.S.E.M.
Cole, William Edwin (c)	Hundred	2nd. Yr. Law
Coleman, Kelly Sherrill (c)	Beckley	Fr., A.B.
Collett, Armand Rene (c)	Morgantown	Jun., A.B.
Collier, Gwendolen Langfitt	Tulsa, Okla.	Soph., A.B.
Colon, Jose	Arsecibo, P. R.	2nd. Yr. Law
A.B. University of Michigan, 1916.		
Compton, Ada Blanche	Morgantown	Soph., A.B.
Compton, Harry Crawford (c)	Grafton	Fr., A.B.
Compton, Vernon Clay (c)	Morgantown	Jun., A.B.
Conaway, Elizabeth	Fairmont	Soph., A.B.
Conaway, James Lawrence	Barrackville	3rd. Yr. Law
Condon, Marguerite Blanche	Point Marion, Pa.	Soph., A.B.
*Conn, Harry Edward (c)	Point Marion, Pa.	Fr., A.B.
Conner, Frank Eugene (c)	Charleston	1st. Yr. Law
Conner, Joseph Alger (c)	Moundsville	B.S., 2 Yr. Med.
Connor, James Michael (c)	Ennis, Texas	Jun., B.S.E.E.
Coogle, Rachel Agnes	Morgantown	Fr., A.B.
Cook, Alton Aldrich	Boston, Mass.	Grad., A. & S.
S.B. Mass. Inst. Tech., 1915.		
Cook, Alvin Jenner (c)	Beckley	Fr., A.B.
Coombs, Edith Ellwood	Morgantown	Fr., A.B.
Coombs, Forrest Pembrock	Morgantown	Sen., B.S.
Cooper, Cora	Auburn	Fr., A.B.
*Cooper, Fred Vermillion (c)	Athens	Fr., B.S.E.E.
Cooper, Grover Cleveland	Auburn	Jun., A.B.
Cooper, George Spencer, Jr.	Charleston	Jun., A.B.
Copley, Thomas Eugene (c)	Camden	Fr., A.B.
Core, Barton Dayton	Cassville	Soph., A.B.
Cork, Donald Lupton	Charleston	3rd. Yr. Law
A.B. Hampden-Sidney College, 1913.		
Cormany, William John Benjamin (c)	Davis	Jun., A.B.
Cottle, John Brooks (c)	Spencer	Soph., A.B.
Courtney, Catherine	Morgantown	Special A. & S.
Cowl, James Lancaster (c)	Wheeling	Fr., A.B.
Cox, Floyd Brooks	Morgantown	Jun. A.B.
Cox, Geneva Love	Coldwater	Soph., A.B.
Cox, James Carl	Cox's Mills	Jun., B.S.Agr.
Cox, Wayne	Morgantown	Special A. & S.
Crane, Dorothy Marvin	Morgantown	Soph., A.B.
Crane, Florence McCoy	Morgantown	Sen., A.B.
Crane, Harley Lucius	Morgantown	Grad., Agr.
B.S. Agr. West Virginia University, 1914.		
Crawford, Harry Jacob	Dawson, Pa.	Fr., B.S.C.E.
Crawford, John Sanderson (c)	Sharon	Fr., A.B.
Crawford, Thomas Maurice	Dawson, Pa.	Fr., B.S.C.E.
Creasy, Frank Mahone	Elgood	Fr., A.B.
Creasy, William Leonard	Elgood	Fr., A.B.
Cree, George Fletcher (c)	Wellsburg	Fr., A.B.
Creel, Thomas Hardin	Kanawha Station	Grad., A. & S.
B.S. West Virginia University, 1915.		
*Creighton, John Seamon (c)	Elm Grove	Fr., B.S.Agr.

Creighton, Myrtle Louise	Parkersburg	Soph., A.B.
Crigler, Guy	Franklin	Fr., A.B.
Criswell, Robert Lysle (c)	Martinsburg	Fr., A.B.
Cronin, Daniel Francis	Richwood	Jun., B.S.E.E.
Cronin, Harry Raymond (c)	Richwood	1st. Yr. Law
Crooks, Ruth Wilkinson	Ravenswood	Fr., B.S. in H.E.
Crossland, Howard Young	Belle Vernon, Pa.	Fr., A.B.
Cumley, Luella	Morgantown	Soph., A.B.
Cummings, Irene De Sales	Weston	Fr., A.B.
Curren, Mary Margaret Agnes	Elm Grove	Fr., A.B.
Currey, Percy Howell	Flemington	1st. Yr. Law
LL.B. Georgetown University, 1916.		
Curry, Dorsey Jefferson (c)	Grafton	1st. Yr. Ph.G.
Curry, Harry (c)	Grafton	3rd. Yr. Law
Curtis, Everett McChesney (c)	Huntington	Soph. B.S.E.E.
Darling, Anna Belle	Morgantown	Soph., A.B.
Darrah, Robert Carlyle, Jr. (c)	Wheeling	Soph., B.S.M.E.
Darst, Moses McKay (c)	Charleston	2nd. Yr. Law
Daugherty, Grattan Mitchell (c)	Hinton	Fr., A.B.
David, Waitman	Morgantown	Fr., A.B.
Davidov, Nathan Jacob (c)	Keystone	1st. Yr. Med.
Davidson, Helen Virginia	Wheeling	Jun., A.B.
*Davies, Garfield	Morgantown	Fr., A.B.
Davis, Arlene	Clendenin	Fr., A.B.
Davis, Charles Norman (c)	Morgantown	Fr., B.S.E.E.
Davis, Esten (c)	Pence Springs	Fr., B.S.E.E.
Davis, Floyd Leslie (c)	Piedmont	Soph., B.S.E.E.
Davis, Gail	Morgantown	Grad. A. & S.
A.B. West Virginia University, 1912.		
Davis, Mabel Louise	Morgantown	Soph., A.B.
*Davis, Norvel Reed	Charles Town	Fr., B.S.Agr.
Davis, Orla Aldis	Clendenin	Sen., A.B.
Davis, Richard Earle	Morgantown	3rd. Yr. Law
A.B. West Virginia University, 1915.		
Davis, Thedford Owen (c)	Huntington	Fr., A.B.
Davis, William Browning (c)	Princton	Fr., A.B.
Davis, William Robinson (c)	Keyser	Fr., B.S.E.E.
Dawson, Joseph Power	Ward	3rd. Yr. Law
DeBerry, Anna Holme	Romney	Fr. A.B.
DeBerry, Tina Belle	Terra Alta	Soph., A.B.
DeForest, Clayce Remine (c)	Clarksburg	2nd. Yr. Med.
*DeGrange, Lawrence Cornelius (c)	Berkeley Springs	1st. Yr. Ph.G.
Deitz, Ernest Edgar	Mulvane	Soph. A.B.
Dennis, John Waldron	Grundy, Va.	Fr., B.S.Agr.
DePue, Harold Foster (c)	Spencer	Soph., B.S.Agr.
DePue, Jonathan Wamsley (c)	Spencer	Fr., B.S.Agr.
Deveny, Charles Brooks	Fairmont	Special Law
Dewar, Donald (c)	Parkersburg	Fr., B.S.C.E.
Dodson, Linden Seymour (c)	Morgantown	Soph., B.S.Agr.
Donley, William Guy	Shepherdstown	Jun., A.B.
*Donnally, Fitzhugh (c)	Charleston	Fr., B.S.E.E.
Donnally, Hugh Lynn (c)	Lewisburg	Soph., A.B.

Dorsey, Blaine (c)	Elm Grove	Fr., A.B.
Dorsey, Ervin	Morgantown	Soph., B.S.Agr.
Dorsey, Ida Belle	Mt. Lookout	Soph., B.S. in H.E.
Dorsey, J B (c)	Moundsville	Jun., A.B.
Dorsey, James Walter (c)	Wheeling	Soph., A.B.
Dowdy, Guy (c)	Union	Sen., B.S.Agr.
Dowdy, Olive Tallman	Beech Hill	Fr. B.S. in H.E.
Doyle, Edwin Joseph (c)	Wheeling	Fr., B.S.E.E.
Drake, Leslie Giles (c)	Davis	B.S., 2 Yr. Med.
*Duke, Harry Cyrus (c)	Spencer	Fr., A.B.
Duling, Hugo Bruce (c)	Morgantown	Jun., B.S.E.E.
Duling, Milton Stone (c)	Morgantown	B.S., 1 Yr. Med.
Duncan, Carl Ray (c)	Morgantown	Sen., B.S.C.E.
Dunn, William Spurgeon	Sophia	Soph., A.B.
Duthie, Robert William (c)	Clarksburg	Sen., A.B.
Dye, Mabel Taylor	Mineral Wells	Fr., A.B.
Easley, John White (c)	Bluefield	3rd. Yr. Law
*Eberley, Rowena Etta	Canvas	Fr., A.B.
Edwards, Fred Oliver (c)	Wheeling	Fr., A.B.
Eichelberger, Irene	Pierce	Fr., A.B.
Elig, Helen Jerich	Wheeling	Fr., A.B.
Ellis, Brooks Fleming (c)	Pleasants	Fr., B.S.E.E.
Eneix, Lloyd Cecil	Wheeling	2nd. Yr. Law
Evans, Alma	Grafton	Fr., A.B.
Evans, Harold Parriott (c)	Cameron	Soph., A.B.
Evans, James Miller (c)	Morgantown	B.S., 2 Yr. Med.
Everhart, Lysle Rogers (c)	Keyser	Fr., A.B.
Ewing, Clara Pyle	Morgantown	Special A. & S.
Fallows, Lucy Caroline	Wheeling	Fr., A.B.
Falls, Orr	Diagonal, Iowa	1st. Yr. Med.
B.A. Simpson College, 1916.		
Farmer, George Robert (c)	New Martinsville	Fr., A.B.
Farquharson, John Bowman (c)	Landgraff	Special Eng'g.
Fast, Herman Otha	Sutton	Jun. A.B.
Federer, George Andrew, Jr.	Morgantown	Soph., A.B.
Federer, Greenland Thompson	Morgantown	Fr., A.B.
Felton, Janet Flora	Parsons	Soph., A.B.
*Felton, John Harold (c)	Parsons	Fr., A.B.
Ferguson, Josephus Baxter	Morgantown	Soph., B.S.Agr.
*Ferguson. Samuel James (c)	Wayne	Fr., A.B.
Fidler, Leland Willis	Harrisville	Soph., B.S.M.E.
Fidler, Raymond Elmore (c)	Harrisville	3rd. Yr. Law
Filler, Paul Benton Scott (c)	Paw Paw	Fr., B.S.E.E.
*Finley, Claire (c)	Chester	Fr., B.S.C.E.
Fisher, Arlyne Agnes	Reynoldsville, Pa.	Soph., A.B.
Fisher, Claire	Reynoldsville, Pa.	Jun., A.B.
Fisher, William Curtis (c)	Morgantown	Soph., B.S.E.E.
Fitzgerald, Frances Pride	Bluefield	B.S. in H.E.
Fleming, Carrie Kathryn	Grafton	Soph., A.B.
Fleming, Goldie Mae	Morgantown	Sen., A.B.
Fleshman, Charles Marion	Blue Sulphur Springs	Fr., A.B.
Fling, Tracy O	Burnt House	Sen., B.S.Agr.
Flinn, Virgil Lewis (c)	Ravenswood	Jun., A.B.

Florence, Ruby Irene	Parkersburg	Sen., A.B.
Flournoy, Alexander White	Charleston	Special Law
Floyd, John Campbell (c)	Sutton	Fr., B.S.Agr.
Ford, Orfa Rex	Salem	Jun., A.B.
Fox, Babb Lee	West Milford	Fr., B.S.M.E.
Fox, Earle Sanders (c)	Fairmont	Fr., A.B.
Fox, Edwin Alfred (c)	Bluefield	1st. Yr. Phar.
Fox, Francke Fulcher (c)	Bluefield	B.S., 1 Yr. Phar.
Frankenburger, Roy Taylor (c)	Morgantown	Fr., B.S.M.E.
Frashure, Phyllis Anna	Beverly	Soph., A.B.
Frashure, Reginald Claire (c)	Clarksburg	Fr., B.S.C.E.
Frazier, Lester Elwin (c)	Morgantown	Sen., A.B.
Freutel, William Forest (c)	Huntington	Soph., B.S.C.E.
Friend, Angie Alabama	Morgantown	Fr., A.B.
Frum, John Maurice (c)	Rosemont	Fr., B.S.C.E.
Frum, William Hobart (c)	Rosemont	Fr., B.S.M.E.
Fulcher, Paul Milton	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1916.		
Fulton, Ida Pearl	Huntington	Jun., A.B
Furbee, Flora Louise	Middlebourne	Sen. A.B.
Furbee, Frances Elizabeth	Mannington	Jun., A.B.
Furbee, Russell Logan (c)	Mannington	Jun., A.B.
Fuss, Neva Lucile	Hedgesville	Fr., A.B.
Gamble, Harry Edwin (c)	New Martinsville	Fr., B.S.Agr.
Gandy, Ralph Hillman (c)	Benwood	Fr., A.B.
Garrett, Harold Michael (c)	Bridgeport	Jun., A.B.
Garrett, Patrick Henry (c)	Mt. Hope	Fr., A.B.
*Gaschler, Marie Anna	Morgantown	Fr., A.B.
Gaston, William Bryan (c)	Clarksburg	Fr., A.B.
Gayley, Charles Thornton	Richwood	Sen., A.B.
*Gayley, William Wallace (c)	Richwood	Fr., B.S.Agr.
Gibson, Lloyd Camden	Wheeling	Sen. B.S.C.E.
Gibson, Luther Vernon (c)	Clay	Fr., A.B.
Gibson, Mary Blanche	Sutton	Fr., A.B.
Gibson, Xanna Belle	Sutton	Jun., B.S. in H.E.
Griffin, James Vincent	Elm Grove	Jun., B.S.Agr.
Gilbert, Donald Monroe	Morgantown	Grad., A. & S.
Gilmore, Bernard Harold (c)	Piedmont	Soph., A.B.
Gilmore, Samuel Morris (c)	Piedmont	Fr., A.B.
Given, William Edward	Wellsburg	Fr., A.B.
Givens, William Wiley	Keenan	Grad., A. & S.
A.B. West Virginia University, 1915.		
Givens, Tula Rose	Keenan	Jun. B.S. in H.E.
Glass, Edgar Curran (c)	Wellsburg	2nd. Yr. Law
Glasscock, William Ellsworth, Jr.	Morgantown	Jun., A.B.
Glover, Howard Willis (c)	Glover Gap	Fr., A.B.
Glover, Rae	Morgantown	Fr., A.B.
Godfrey, Sara Opal	Morgantown	Soph., A.B.
Goff, Frankie Florence	Pennsboro	Fr., A.B.
Goff, John Trevy (c)	Hazel Green	Fr., A.B.
Golden, Benjamin Ira	Elkins	Grad., A. & S.
A.B. Tufts College, 1916.		
Gompers, William Joseph	Wheeling	Special Law

Gooding, Forrest Nelson (c)	Terra Alta	Soph., B.S. Agr.
Goodwin, Mabel Reay	Morgantown	Fr., A.B.
Gordon, William Ralph	Wheeling	Sen., B.S.Agr.
Gorman, Noel McLane (c)	Morgantown	Fr., A.M.
*Gorman, William Elliott (c)	Morgantown	Fr., A.B.
Goucher, Mary Elizabeth	Toronto, Ohio	Soph., A.B.
Graham, William Carleton (c)	St. Albans	Fr., B.S.E.E
Gray, Gordon Maxwell (c)	Parkersburg	Soph., B.S.C.E.
Gregg, John Morton, Jr. (c)	Morgantown	Fr., A.B.
Gregowski, Frances Loyd	Morgantown	Soph., B.S.Agr.
Griffith, Omer Dean (c)	Madison	1st. Yr. Phar.
Griffith, Vernie Fay	Spanishburg	Fr., B.S. in H.E.
Grose, John Edwin (c)	Sutton	A.B., 1 Yr. Law
Grossman, Morris (c)	Follansbee	Sen., A.B.
*Groves, Agnes	Summersville	Fr., B.S. in H.E.
Grow, Eugene Ashby (c)	Williamstown	Fr., A.B.
Guiher, James Morford	Smithfield, Pa.	Jun., A.B.
Gunnoe, George Hutchinson	Beckley	Jun., A.B.
Gunnoe, Otway Marshall	Crany	Sen., A.B.
Guseman, Virginia Ruthe	Morgantown	Sen., A.B.
Guthrie, James Ray	Morgantown	Sen., B.S.Agr.
Gwinn, Lulu Ann	Rand	Soph., A.B.
Hagan, Arthur Michael	Morgantown	Jun., B.S.E.M.
Hagen, Julian Lamar (c)	Morgantown	1st. Yr. Law
A.B. West Virginia University, 1916.		
Hager, Paul Edmund (c)	Charleston	Special Phar.
Hagerman, Paul (c)	Cameron	A.B., 1 Yr. Med.
Hague, Clyde Watson (c)	Huntington	2nd. Yr. Law
Hale, Luther Fleming	Princeton	2nd. Yr. Phar.
Hall, Beatrice Loraine	Monongah	Jun., A.B.
Hall, Burton Alvin	Newell	Fr., A.B.
Hall, Forest Glen	Pullman	Sen., B.S.Agr.
Hall, Frank	Keyser	Grad., A. & S.
B.S. West Virginia University, 1914.		
Hall, Golda Elizabeth	Morgantown	Soph., A.B.
Hall, Goldan Orlando (c)	Parkersburg	Fr., B.S.Agr.
*Hall, Heston Karl	Princeton	Fr., A.B.
Hall, Ila Bent	Morgantown	Fr., B.S. in H.E.
Hall, John Ruskin (c)	Weston	Grad., A. & S.
A.B. Otterbein University, 1914.		
Hall, Margaret	Proctor	Sen., A.B.
Hall, Olive Burr (c)	Morgantown	Soph., A.B.
Hall, Viola Myrtle	Morgantown	Soph., A.B.
Haller, Morris Jacob (c)	Rivesville	Sen., A.B.
Halloran, Earl Thomas (c)	Hinton	Fr., B.S.M.E.
Hambrick, Bertha Skaggs	Alderson	Special Agr.
Hambrick, Ernest	Athens	Jun., B.S.Agr.
Hamilton, Emery Wilson	Bearsville	Jun., B.S.Agr.
Hamilton, Estelle	Fairmont	Jun., A.B.
Hammond, Clay Duckworth (c)	West Union	Soph., A.B.
Hammond, David Marcellus (c)	Moundsville	Fr., B.S.C.E.
Hammond, Percy Don	Weston	Sen., A.B.
Hamrick, Blaine	Clarksburg	Special Law

Hamrick, Lucretia Olive	Webster Springs	Soph., A.B.
*Hanford, Josephine	Morgantown	Fr., A.B.
Hankey, Pansy May	Belington	Jun., A.B.
Hanks, Renel Mucklaw (c)	St. Albans	Fr., B.S.E.E.
Hann, Willis Hatfield (c)	Morgantown	Fr., A.B.
Hardesty, Mearle Ellen	Morgantown	Fr., B.S. in H.E.
Hardman, Albert Foster (c)	Jane Lew	Sen., A.B.
Hardman, Orrin	Troy	Fr., A.B.
Hardy, West	Keyser	Soph., A.B.
Harker, Herbert Fletcher	Wana	Soph., B.S.M.E.
Harper, Howard Morrill (c)	Elkins	Sen., B.S.E.E.
*Harrah, Beatrice Marie	Wellsburg	Fr., A.B.
Harris, Ernest Mullen (c)	Morgantown	Special Phar.
Harrison, Matthew Waite (c)	Weston	Fr., B.S.Agr.
Harsch, Neville Edward (c)	Richwood	Fr., A.B.
Harshbarger, Jennie	Cumberland, Md.	Fr., A.B.
Hartley, Alpha Ruth	Cottageville	Special A. & S.
Hartley, Florence Geraldine	Masontown	Fr., A.B.
Hartmann, Arlett Bryan (c)	Morgantown	Fr., A.B.
Hartman, Bruce	Albright	Fr., A.B.
Hartman, Paul	Albright	Fr., A.B.
Hatch, Robert Edwin	Morgantown	Special A. & S.
Hatch, Walter Albert	Morgantown	Sen., A.B.
*Hatfield, Dan (c)	Charleston	Fr., A.B.
Hatfield, Willard Elias	Willaimson	Fr., A.B.
Hatfield Wirt Fair (c)	Willaimson	Fr., A.B.
Haun, Bertha Loe	Morgantown	Fr., A.B.
Hawkins, George Allen (c)	Parkersburg	Jun., A.B.
Hawkins, Paul Minor (c)	Fairmont	Sen., B.S.Agr.
*Hayes, George Knight (c)	Morgantown	Fr., A.B.
Hayes, Mary Tirzah	Lewisburg	Soph., A.B.
Hays, James Franklin (c)	Weston	Fr., A.B.
Hays, Lucile Virginia Morgan	Glenville	Soph., A.B.
Headlee, Herbert	New Martinsville	Jun., B.S.M.E.
Heavner, Marguerette Gertrude	Elkins	Sen., A.B.
Hedrick, Oley Foster	Brushy Run	Fr., B.S.C.E.
Henrie, Howard (c)	Williamstown	Sen., B.S.Agr.
Henry, Blanche Jean	Fairmont	Fr., A.B.
Henry, Otto Hazelton (c)	Morgantown	Soph., B.S.M.E.
Henry, Robert McKenzie	Fairmont	Sen., A.B.
Henshaw, William Veech	Uniontown, Pa.	Fr., A.B.
Hepburn, Margaret May	Lonaconing, Md.	Fr., A.B.
Hervey, Mary Amanda	Elm Grove	Sen., A.B.
Herzbrun, Edward Adolph (c)	Welch	1st. Yr. Law
Hess, Harold Clare (c)	Mannington	Fr., A.B.
Higgs, Ward Wane (c)	Mannington	Fr., A.B.
Highby, Harlo Wilber	Morgantown	Jun., B.S.Agr.
Higginbotham, Stuart Johnston	Athens	Fr., A.B.
Hijikata, Kurazo	Kokura, Japan	Special Eng'g.
Hildreth, Aubrey Clare	Mannington	Sen., B.S.Agr.
Hill, Lorna Mabel	Shepherdstown	Soph., A.B.
Hill, Norma Ruth Barrett	Middlebourne	Soph., A.B.
Hill, William Everett	Middlebourne	Jun., A.B.
Himes, William Daniel	Shepherdstown	Jun., A.B.

*Hinebaugh, Daniel Stuart (c)	Thomas	Fr., B.S.C.E.
Hinerman, Emmett (c)	Cameron	1st. Yr. Phar.
Hite, Clay Brammer (c)	Huntington	Soph., B.S.E.E.
Hoard, Elma	Point Marion, Pa.	B.S., 1 Yr. Med.
*Hoge, Elizabeth	Waynesburg, Pa.	Fr., A.B.
Hogg, Robert Lynn	Point Pleasant	3rd. Yr. Law
A.B. West Virginia University, 1914.		
*Hogue, Frank William (c)	Fairview	Fr., A.B.
Holcomb, Nelle	Sutton	Fr., A.B.
Holdroyd, Annie Lee	Athens	Fr., B.S. in H.E.
Holroyd, Trevor (c)	Athens	Fr., A.B.
Hoover, Wendell Webster (c)	Webster Springs	Soph., A.B.
Hopkins, John Cogley (c)	Cameron	Fr., A.B.
Hormell, Walter Harrison (c)	Morgantown	Fr., B.S.M.E.
Hough, Roscoe Rhodes	Wellsburg	Fr., A.B.
House, George Edward (c)	Wheeling	Special Agr.
Houston, Fred Emerson (c)	Elm Grove	Soph., A.B.
Howell, Fred Garfield	New Kensington, Pa.	Fr., A.B.
Howell, Harold Harry (c)	Philippi	Fr., A.B.
Howery, Embleton Ray (c)	Hansford	Soph., B.S.E.E.
Hubbard, Leonard Cecil	Princeton	Fr., A.B.
Huffman, Edwin Gray (c)	Spencer	Fr., A.B.
Huffner, Flo Elizabeth	Cameron	Fr., A.B.
Hull, Lois Linn	Parkersburg	Fr., A.B.
Hull Maud	Freemansburg	Jun., A.B.
Humphrey, Thomas Field (c)	Wheeling	Fr., B.S.E.E.
Hunt, William French	Morgantown	2nd. Yr. Law
A.B. West Virginia University, 1912.		
Hupp, Edwin Erle	Parkersburg	Grad., A. & S.
B.S. Agr. West Virginia University, 1915.		
Hupp, John Clemens	Morgantown	Soph., B.S.Agr.
*Hurd, Wallace Averell (c)	Richwood	Fr., B.S.Agr.
Hustead, Ivy Ina	Fairmont	Soph., A.B.
Hutchinson, Harold (c)	Fairmont	Fr., A.B.
Hutchinson, Hickory Clay (c)	Duncan	Fr., B.S.Agr.
Hutchinson, Orland Clarence (c)	Leroy	Fr., B.S.Agr.
Hutchinson, Sarah Emily	Cameron	Fr., A.B.
Hyde, Richard Elkins (c)	Martinsburg	Soph., A.B.
Hyman, Morton (c)	Keystone	Special A. & S.
Hypes, James Lowell	Ronceverte	Grad., A. & S.
Ice, Frank Arnett (c)	Fairmont	Jun., B.S.Agr.
Irwin, Arnold (c)	Huntington	Fr., B.S.Agr.
Jaco, Jesse Miller (c)	Morgantown	Fr., A.B.
Jacob, John Jeremiah, Jr.	Wheeling	Grad., C.E.
B.S.C.E. West Virginia University, 1915.		
Jacobs, Virginia	Morgantown	Jun., A.B.
Jarvis, Roy Hugh	Morgantown	Soph., A.B.
Jasper, William Nile (c)	Wheeling	Fr., B.S.E.E.
Jennings, Charles Irwin (c)	Morgantown	Jun., B.S.C.E
John, Benjamin Clifford (c)	Morgantown	Soph., A.B.
Johnson, David Morrison (c)	Keyser	Fr., A.B.
Johnson, Lulu May	Union	Sen., B.S.Agr.

Johnson, William F.	Welch	1st. Yr. Phar.
*Johnston, Dale Scott (c)	Huntington	Fr., B.S.C.E.
Johnston, Drexel Marion	New Martinsville	Fr. A.B.
Jonhston, Olive Mae	Morgantown	Fr., A.B.
Johnston, Ross Bradshaw	Grafton	Fr., B.S.C.E.
Jolliffe, Charles Byron	Morgantown	Grad., A. & S.
B.S. West Virginia University, 1915.		
*Jolliffe, James Edmund	Morgantown	Fr., B.S.E.E.
*Jolliffe, Mary Esther	Morgantown	Fr., B.S. in H.E.
Jolliffe, Oliver Paul	Morgantown	Sen., B.S.E.E.
Jones, Alta Flora	Morgantown	Soph., A.B.
Jones, Dorothy Delmonde	Belington	Fr., A.B.
Jones, Edward Oliver	Morgantown	Special A. & S.
Jones, William Henry	Richwood	Grad. Agr.
B.S. West Virginia University, 1915.		
Jones, William Samuel (c)	Morgantown	Soph., A.B.
Judge, Helen Cyril	Grafton	Jun., A.B.
Juergens, Charles Otto (c)	Sutton	Fr., A.B.
Juergens, James Samuel (c)	Sutton	Soph., B.S.C.E.
*June, Kester Isaac (c)	Spencer	Fr., A.B.
Kahn, Hilda Rebecca	Morgantown	Jun., A.B.
Kaltenbach, Charles Joseph (c)	Wheeling	Sen., B.S.C.E.
Kaltenbach, Harold Joseph (c)	Wheeling	1st. Yr. Law
Kane, Harold Hasting (c)	Weston	Soph., A.B.
*Kay, Robert Harry Christopher (c)	Leon	Fr., A.B.
Keadle, Okey Paul (c)	Williamson	2nd. Yr. Law
Kearns, Michael Joseph (c)	Hundred	Soph., B.S. and Eng'g.
Keefer, Mildred Clayton	Grafton	Soph., A.B.
*Keenan, Walter McCabe	Grafton	Fr., A.B.
Keller, Elva Virginia	Morgantown	Soph., B.S.Agr.
Kelley, Robert Edward (c)	Thurmond	Special Phar.
Kelley, Robert Gorrell (c)	Sutton	Fr., A.B.
Kendrick, William Henry	Morgantown	Grad., A. & G.
A.B. West Virginia University, 1916.		
Kennedy, James Edward	Boothsville	3rd. Yr. Law
A.B. West Virginia University, 1913.		
Kerr, Harman Haller (c)	Morgantown	2nd. Yr. Law
Kersting, Eugene Josiah (c)	Clarksburg	Grad. A. & S.
B.S. West Virginia University, 1916.		
Kessel, Charles Royall (c)	Ripley	Soph., A.B.
Kidd, Hubert Herse (c)	Hillsboro	Fr., A.B.
Kiger, Gertrude Elizabeth	Morgantown	Soph., B.S.Agr.
Kimble, Brison Edwin	Morgantown	Sen., A.B.
Kimmel, Dorothy	Grafton	Fr., B.S. in H.E.
Kimmel, Isabel Harriett	Grafton	Fr., B.S. in H.E.
Kincade, Cora Eleanor	Fairmont	Sen., A.B.
*King, Andrew Vaughn (c)	Wheeling	Fr., A.B.
King, Clarence Lee	Ronceverte	Jun., B.S.Agr.
King, Howard Sherman	Cameron	Fr., A.B.
King, Rufus Orr (c)	Weston	Fr., A.B.
*Kirk, Albert Bascom (c)	Hillsboro	Fr., B.S.Agr.

*Kiser, Ivan Boyce (c)	Huntington	1st. Yr. Phar.
Kislig, Charles	Morgantown	Soph., B.S.Agr.
Kleiman, Ira (c)	Bluefield	Fr., A.B.
Klein, Frances Viola	Grafton	Sen., A.B
Klug, Thomas Michael (c)	Proctor	Fr., A.B.
Knabenshue, Brace Sloan (c)	Clay	Sen., A.B.
Knapp, Forrest Dunbar (c)	Morgantown	Jun., A.B.
Knapp, John Oliver	Morgantown	Grad. Agr.
B.S. Agr. West Virginia University, 1916.		
Knapp, Ulysses Austin	Fairmont	3rd. Yr. Law
Knight, John Jarret (c)	Lewis	Soph. B.S.M.E.
Knode, William Franklin, Jr. (c)	Fairview	Soph., B.S.C.E.
Knott, Edgar Strother (c)	Shepherdstown	Soph., B.S.Agr.
Koblegard, John, Jr. (c)	Clarksburg	Fr., A.B.
Koletka, Elizabeth May	Huntington	Soph., A.B.
Koon, Howard Thomas (c)	Monongah	Fr., A.B.
Kraus, Joseph Michael (c)	Weston	Fr., A.B.
Kyle, Clark W. (c)	Clarksburg	Fr., A.B.
Kyle, Ernest Ide (c)	Welch	Special A.B.
Kyle, Karl Byron (c)	Clarksburg	1st. Yr. Law
Laas, Albert William (c)	Benwood	Soph., A.B.
Lamb, Merchant J.	Glenville	Soph., A.B.
Lambert, Fred Bussey	Barboursville	Sen., A.B.
Lambert, Luther Rush (c)	Welch	Soph., A.B.
Lambert, Oscar Doane	Red Creek	Grad., A. & S.
A.B. West Virginia University, 1916.		
Lambert, Pearl Tevault	Barboursville	Fr., B.S. in H.E.
Lanham, Lula May	Grafton	Jun., A.B.
Lanham, Martin Ward	Grafton	2nd. Yr. Law
B.S. West Virginia Wesleyan College, 1912.		
Lantz, Florence Missouri	Jacksonburg	Soph., A.B.
Lathem, Claud Aubra (c)	Ravenswood	Fr., A.B.
Latterner, John Basil (c)	Morgantown	Special Eng'g.
Laulis, Andrew Jackson (c)	Enterprise	Fr., A.B.
Laulis, Thomas Howard (c)	Enterprise	Fr., A.B.
*Law, Dennis Ison (c)	Cairo	Fr., B.S.Agr.
Law, Russell Lowell	Lawford	Jun., B.S.Agr.
Lawrence, Linwood Theodore	Morgantown	Sen., A.B
*Lawson, Leon Kline (c)	Auburn	Fr., A.B.
Lazzell, Charles Lester (c)	Morgantown	Jun., A.B.
Lazzelle, Donald Grant	Morgantown	2nd. Yr. Law
*Leaman, Paul Miller (c)	Fairmont	Fr., A.B.
Leidig, Joseph Guy	Steelton, Pa.	Jun., B.S.Agr.
Lentz, Joseph Howard (c)	New Martinsville	Fr., B.S.M.E.
Leonard, George Washington	Beverly	Fr., A.B.
LePera, Frances Margarita	Morgantown	Fr., A.B.
Levin, Sydney (c)	Fairmont	Fr., A.B.
Lewis, Leonard (c)	Charleston	Fr.,B.S.C.E.
Lewis, Lily	Williamson	Fr., A.B.
Lewis, Stella Mabel	Sutton	Soph., A.B.
Licklider, Bessie Butler	Shepherdstown	Fr., A.B.
*Lilly, Preston (c)	Athens	Fr., A.B.
*Limerick, Ida Fitzhugh	Morgantown	1st. Yr. Phar.

Linger, Maynard	Horner	Jun., B.S.Agr.
Liston, Jesse Earle	Morgantown	Soph., B.S.Agr.
Little, Thomas Amos	Bramwell	Special Law
Long, Eugene Homer (c)	Bluefield	2nd. Yr. Law
Longanecker, Clarence Linden	Morgantown	Sen., B.S.E.E.
Looney, Jacob Christian (c)	Spencer	Fr., B.S.Agr.
Lorentz, Joseph Mifflin (c)	Sutton	Fr., B.S.Agr.
Loudin, Sallie Fogg	Morgantown	Jun., A.B.
Love, Samuel Alfonso (c)	Huntington	Fr., A.B.
Lovett, Lalah	Bulltown	Soph., A.B.
Lowe, John Moore (c)	Morgantown	Sen. B.S.Agr.
Lowe, Robert Paul (c)	Morgantown	Sen. B.S.Agr.
Lowry, Raymond Jerry (c)	Keyser	Special Phar.
Lowry, Thomas Frederick (c)	Paden City	Fr., A.B.
Luckey, Howard Nelson (c)	Charleston	2nd. Yr. Law
Lungren, Charles Howard	Swarthmore, Pa.	Fr. A.B.
Lynch, Anna Clayton	Morgantown	Fr. A.B.
Lynch, Berda Barbee	Morgantown	Fr. A.B.
Mackey, William K. (c)	Cameron	1st. Yr. Med.
Madeira, Irene Elizabeth	Morgantown	Fr., A.B.
Medeira, William Bernard (c)	Morgantown	Soph., A.B.
*Madera, William Luther (c)	Morgantown	Fr., A.B.
Male, Hanford	Bartlett, Ohio	1st. Yr. Phar.
Male, Willard Harold	Bartlett, Ohio	Fr., B.S.E.E.
Malone, Paul Earl (c)	Grafton	1st. Yr. Phar.
Malott, Ivy May	Bedford, Ind.	Grad., A. & S.
B.S. University of Chicago, 1915.		
Marshall, Anna Mary	Morgantown	Jun., A.B.
Marshall, Karl Lyon (c)	Morgantown	Soph., B.S.E.M.
Martin, Cyrus Howard	Thomas	Soph., B.S.Agr.
Martin, Gertrude	Morgantown	Soph., A.B.
Martin, Lloyd Daniel	Lewis	Sen., A.B.
Martin, Margaret Virginia	Bluefield	Jun., A.M.
Martin, Seba James (c)	Shinnston	Fr., A.B.
Martin, Truman Morris	Newell	Grad., A. & S.
A.B. West Virginia University, 1914.		
Martinez, Arturo (c)	Humacao, P. R.	1st. Yr. Med.
Matheny, Harry Arthur	Sincerity	Fr. A.B.
Matheson, Earle Scarborough (c)	Morgantown	Sen., A.B.
Matheson, Rosarii Marie	Morgantown	Fr., A.B.
Matlick, Meredith Miers (c)	Keyser	Fr., B.S.C.E.
Mauzy, Frank	Rexrode	Jun., A.B.
Mauzy, Michael Harper (c)	Franklin	Soph., A.B.
*Maxwell, Cyrus Haymond, Jr.	Morgantown	Fr., A.B.
Maxwell, Frank Jarvis	Clarksburg	Fr., A.B.
Maxwell, Paul Rufus (c)	Morgantown	Fr., A.B.
May, Lora Eva	Fairmont	Fr., A.B.
*Mayfield, Madge Emerson	Morgantown	Fr., A.B.
Mayfield, Merle Carter	Morgantown	Soph., A.B.
McAuliffe, Anthony Clement	Wheeling	Fr., A.B.
McBee, Lyle Henderson (c)	Fairview	Fr., A.B.
McCarnes, Allan Hunter (c)	Middlebourne	Soph. B.S.C.E.
McClain, Raymond Clifford	Point Marion, Pa.	Soph. A.B.

McCleary, Edna May	Sherrard	Soph. A.B.
McClung, James Robert (c)	Ronceverte	Fr. A.B.
McClung, Wyatte Nelson (c)	Rupert	Special Agr.
McCombs, Ruth Eliza	Wheeling	Soph. A.B.
*McConihay, John Morris, Jr.	Charleston	Fr., B.S.E.E.
McConnell, Margaret Ethel	Morgantown	Fr., A.B.
McCoy, Fred Jefferson (c)	Sistersville	1st. Yr. Law
McCoy, George Talbot (c)	Sistersville	Soph., A.B.
McCutcheon, Clarence Watkins (c)	Richwood	Jun., B.S.C.E.
McDermott, John Peter (c)	Cameron	Fr., A.B.
McDonald, James Ernest (c)	Inwood	Fr., B.S.Agr.
McDonald, Paul Dane (c)	Flemington	Fr., B.S.E.E.
McDonald, Peerce Naylor	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1900.		
*McDonald, Verda Blanche	Morgantown	Fr., A.B.
McDowell, Charles Wesley (c)	Morgantown	Sen., B.S.C.E.
*McGee, Sidney Lamont (c)	Parkersburg	Fr., B.S.C.E.
McGovran, Thomas Harris (c)	Charleston	Soph., B.S.Agr.
McGovran, Victoria Electa	Charleston	Fr., A.B.
*McGraw, Harry (c)	Follansbee	Fr., B.S.C.E.
*McInnis, Neil Ross (c)	Dola	Fr., B.S.E.M.
*McIntire, George Bartow (c)	Morgantown	Fr., Agr.
*McIntosh, Frederick Frelinghuysen (c)	Spencer	Fr., A.B.
McKee, Louis Alan	Triadelphia	Soph., A.B.
*McGee, Willis Luther	Mt. Morris, Pa.	Fr., B.S.E.E.
McKeever, Cleo Bradford	Greenbrier	Soph., B.S.Agr.
McKenney, Henry Fields	Morgantown	Sen., B.S.Agr.
A.B. University of Kentucky, 1912.		
McKinley, Bruce	Morgantown	Special Agr.
A.B. West Virginia University, 1900.		
McKinley, Marian Josephine	Morgantown	Soph., A.B.
*McKinley, Virginia Louise	Morgantown	Fr., Agr.
McKisson, Elsie Alice	Sistersville	Soph., A.B.
McLain, Henry McColloch (c)	Elm Grove	Fr., B. S.E.E.
McLaughlin, Hubert Lynn (c)	Hollidaysburg, Pa.	Sen., B.S.E.E.
*McMillen, Frank Vincent (c)	Masontown	Fr., A.B.
McMillen, Herbert	Masontown	Grad., A. & S.
A.B. West Virginia University, 1916.		
Meadows, Anderson Dewey (c)	Hinton	Fr., A.B.
Melcher, George Woodring (c)	Bluefield	Sen., Ph.G.
*Meredith, Hugh Allen (c)	Fairmont	Fr., B.S.Agr.
Meredith, Nola Alice	Morgantown	Jun., A.B.
Meritt, Harold Warner	Lawton	Jun., B.S.E.E.
Messenger, Metta Estelle	Baldwin	Fr., A.B.
Michael, Myrtle Ellen	Farmington	Soph., B.S. in H.E.
Miller, Alvin Martin	Jeannette, Pa.	Fr., B.S.M.E.
Miller, Charles Sprigg (c)	Terra Alta	Fr., A.B.
Miller, Edna Margaret	Fairmont	Soph., A.B.
*Miller, Edwin Wiley	Gerrardstown	Fr., B.S.C.E.
Miller, James DeMar (c)	Newell	Fr., A.B.
Miller, Leo Henry (c)	Shepherdstown	A.B., 1 Yr. Law

Miller, Lewis Harrison	Millwood	A.B., 2 Yr. Law
A.B. Ohio University, 1913.		
Mills, Fred Willard (c)	Keyser	Fr., A.B.
Minear, Irene	Davis	Sen., A.B.
*Minor, Charles Donham (c)	Morgantown	Fr., A.B.
Mish, Helen Elizabeth	Bunker Hill	Fr., A.B.
Mitchell, Magdalena	Wheeling	Fr., A.B.
Mohler, Hugh Lee (c)	Parkersburg	Fr., B.S.E.E.
Moist, Ronald Farrow	Charleston	3rd. Yr. Law
A.B. West Virginia University, 1915.		
Moler, Philip Randolph	Charles Town	Special Agr.
*Moler, Raleigh Miller (c)	Shenandoah Junction	Fr., A.B.
Montgomery, Allen Guy (c)	Morgantown	Sen., A.B.
Montgomery, Henry Brinson (c)	Charleston	Fr., B.S.E.E.
Montgomery, James Garner	Kane, Pa.	Jun. B.S.E.E.
*Montgomery, Wilda Lea	Morgantown	Fr., B.S. in H.E.
Mooney, Laura Margaret	Bluefield	Fr., B.S. in H.E.
*Moore, Charles Edgar (c)	Morgantown	Fr., A.B.
Moore, Dana Trescott (c)	Parkersburg	Soph., B.S.Agr.
*Moore, Leslie Dare (c)	Belington	Fr., A.B.
Moore, Margaret Hurley	Ravenswood	Fr., A.B.
Moore, Mary Elizabeth	Keyser	Fr., A.B.
Moore, Wallace (c)	Shinnston	Fr., B.S.Agr.
Moore-Boocks, Howard Earle (c)	Morgantown	B.S., 1 Yr. Med.
Moore-Boocks, Mary Dolores	Morgantown	Soph., A.B.
Moran, Walter Harrison	Fairmont	Fr., A.B.
Morgan, Alfred (c)	Grafton	Fr., B.S.Agr.
Morgan, Cuba Lodema	St. Marys	Soph., B.S. in H.E.
Morgan, Mary Ellen	Morgantown	Sen., A.B.
Morgan, William Haze	Clarksburg	Fr., A.B.
Morris, Charles Burke (c)	Clarksburg	Fr., A.B.
Morris, Donnally Hamilton (c)	Charleston	Fr., A.B.
Morrison, Johnson George	Morgantown	Soph., A.B,
Morrison, Lewis French	Morgantown	Special A. & S.
Morrison, William Byrne (c)	Sutton	B.S., 1 Yr. Med.
Morrow, George Luther	Huntington	Sen., A.B.
Morrow, Julius Floyd (c)	West Alexander, Pa.	Fr., A.B.
Morton, Mayme Edith	Webster Springs	Soph., A.B.
Mossman, Rolland Clyde	Huntington	3rd. Yr. Law
*Mueller, Thomas Theodore	Point Marion, Pa.	Fr., A.B.
Muir, Robert Miller (c)	Havaco	Fr., A.B.
Muldoon, Wade Elliott (c)	Morgantown	Soph., B.S.Agr.
Mullen, Leo Francis (c)	Parkersburg	Fr., B.S.M.E.
Mullen, Robert Emmett (c)	Huntington	Fr., B.S.E.E.
Mullin, Ethel June	Morgantown	Fr., B.S. in H.E.
Myers, Emma Frances	Summersville	Fr., A.B.
Myers, Mabel Amanda	Summersville	Soph., A.B.
*Mylius, Charles Woodford	Alpena	Fr., A.B.
Mylius, Leslie Clair (c)	Alpena	Fr., B.S.E.E.
Nagano, Kazuma	Summit, N. J.	Fr., A.B.
Nash, James Frank	Alderson	Sen., B.S.Agr.
Neely, Forest Hunter (c)	Fairmont	Fr., B.S.M.E.
Neff, Charles Thompson, Jr. (c)	Piedmont	Fr., A.B.
Neff, Leon Alexander (c)	Piedmont	Fr., A.B.

Nefflen, Paul Ewald (c)	Elkins	Fr., B.S.Agr.
Nefflen, William Elliott (c)	Keyser	Fr., A.B.
Nelson, Max Carleton (c)	Morgantown	Sen., B.S.E.E.
Newcomer, Ward	McClellandtown, Pa.	Fr., A.B.
Newman, Rush Carl	Spencer	A.B., 1 Yr. Med.
Nicholson, Blake Edwin	Parsons	Fr., A.B.
Noel, Frank William (c)	Wheeling	Fr., A.B.
Noland, Violet Pearl	Davis	Jun., B.S. in H.E.
Nolte, Harry Frederick (c)	Wheeling	1st. Yr. Med.
Norman, Elsie Mae	Spencer	Sen., A.B.
Noyes, Agnes Young	Charleston	Fr., A.B.
Nutter, Mary Elizabeth	Auburn	Jun. B.S. in H.E.
O'Connor, Robert Emmett	Harding	3rd. Yr. Law
A.B. Davis & Elkins College, 1914; A.B. West Virginia University, 1915.		
*Orr, Ida Agnes	Fairmont	Fr., A.B.
Orr, Mary	Triadelphia	Fr., A.B.
Orr, Uriah Newton, Jr.	Kingwood	Special Eng'g.
Orth, Christina	Charleston	Soph., A.B.
Orth, John Malcolm (c)	Morgantown	Sen., A.B.
Orth, Lawrence Eldred (c)	Morgantown	Fr., B.S.C.E.
Ott, Elmer Patton (c)	Ronceverte	Fr., B.S.Agr.
Padden, Lawrence Charles (c)	Wheeling	Fr., B.S.C.E.
Pancake, McDowell (c)	Romney	Special Agr.
*Parker, Wayne Franklin	Morgantown	Fr., A.B.
Parrish, Kate	Mannington	Jun., B.S. in H.E.
Parsons, Roy Cyrus	Proctor	Fr., B.S.Agr.
Patterson, Frank Henry (c)	Richwood	Fr., B.S.M.E.
*Patterson, Jeannete Greer	Morgantown	Fr., A.B.
Patterson, Mabel Fay	Morgantown	Sen., A.B.
Patterson, Mary Frances	Morgantown	Jun., A.B.
Patterson, Maud Allender	Morgantown	Special A. & S.
Patton, Mabelle Alma	Gap Mills	Jun., B.S. in H.E.
Pauley, Earle William (c)	Grafton	Fr., B.S.E.E.
Payne, John Edward (c)	Clarksburg	Fr., A.B.
Pearcy, Albert Roy (c)	Parkersburg	Fr., A.B.
Peck, Barnett Thomas	Athens	Sen., B.S.C.E.
Peck, Mary Elizabeth	Big Isaac	Soph., A.B.
Pennington, Eunice	Morgantown	Soph., A.B.
Pennington, Gladys	Morgantown	Jun., A.B.
Peoples, Clare Elaine	Cameron	Jun., A.B.
Peoples, Guy	Cameron	Grad., A. & G.
A.B. West Virginia University, 1915.		
Perkins, Edward Eli (c)	Princeton	2nd. Yr. Phar.
Peters, William Louis (c)	Huntington	3rd. Yr. Law
Pfost, Donald Monroe (c)	Spencer	Fr., A.B.
Phillips, Howard Troy (c)	St. George	B.S., 2 Yr. Med.
Phillips, Lawrence David (c)	Weirton	2nd. Yr. Med.
Phillips, Maurice Earl (c)	French Greek	Jun., B.S.Agr.
Phillips, Walter Carfer (c)	Buckhannon	2nd. Yr. Law
A.B. West Virginia University, 1916.		
Pierce, George Stanley	Tunnelton	Jun., B.S.Agr.
*Pitzer, John Hensel (c)	Martinsburg	Fr., B.S.E.E.
*Pocock, Alice Katherine	Morgantown	Fr., A.B.

Poland, Genevieve	Tunnelton	Sen., A.B.
Poling, Forrest Blanchard (c)	Philippi	Fr., A.B.
*Pool, Willard (c)	Chester	Fr., A.B.
Poorman, Nettie Luella	Wheeling	Fr., A.B.
Porter, Harry Powell (c)	Charleston	Fr., B.S.E.E.
Posten, Beulah Martha	Morgantown	Sen., A.B.
Potter, Charles Edward	Wellsburg	Jun., B.S.Agr.
Powell, Jonathan Corbley (c)	Federal	3rd. Yr. Law
Powell, Margaret Grace	Grafton	Fr., A.B.
Pownall, Helen Hannas	Keyser	Fr., A.B.
Pratt, Martha Pauline	Morgantown	Soph., A.B.
Prettyman, Hugh Willard	McMechen	Sen. B.S.Agr.
Price, Blanche Elizabeth	Morgantown	Sen., A.B.
Price, John Raymond (c)	Morgantown	Fr., A.B.
Price, Luther Ezra	Morgantown	Special A. & S.
Price, Otella Beatrice	Morgantown	Jun., A.B.
Price, William Spencer (c)	Morgantown	Soph., B.S.M.E.
Prichard, May Eula	Morgantown	Fr., A.B.
Prichard, Nell	Morgantown	Sen., A.B.
Prince, Elmer Woodward (c)	Morgantown	Fr., B.S.C.E.
Pritchard, Robert Howard (c)	Weston	Soph., A.B.
Proudfoot, Frank Read	Morgantown	Fr., A.B.
Purinton, Helen Elizabeth	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1913.		
Pyle, Marguerite Stringfellow	Morgantown	Fr., A.B.
Pyle, Frank James	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1916.		
Quirk, Robert Emmett	Mannington	Sen., A.B.
Raemsch, Wallace Paul	Elkins	Jun., B.S.E.E.
Rahl, Marvin Edward	Morgantown	Sen., B.S.C.E.
Ralston, Artie Janet	Charleston	Fr., A.B.
Ralston, Er	Weston	Soph., B.S.M.E.
Ramsburg, Theresa	Weston	Jun., B.S. in H.E.
Randolph, Guy Dewey (c)	Williamson	Fr., A.B.
*Rasmussen, Einer Whittier (c)	Philippi	Fr., B.S.Agr.
Ravenscroft, Fred Allan (c)	Keyser	Special Phar.
Ray, Charles	Elm Grove	Fr., A.B.
Raybeck, Ralph Jackson (c)	Morgantown	B.S., 1 Yr. Med.
Reed, Claude Carder	Morgantown	Soph., B.S.Agr.
Reed, Fred Wilton (c)	Procious	Jun., A.B.
Reed, James Madison (c)	Morgantown	B.S. 1 Yr. Med.
Reed, Roland (c)	Clarksburg	Fr., B.S.C.E.
*Reeder, Benjamin Garret	Salem	Fr., A.B.
Reeves, Sarah Alta	Fairmont	Fr., B.S. in H.E.
Reger, Austin Clyde	Kanawha Station	Soph., B.S.Agr.
Rennar, Marie Elizabeth	Morgantown	Fr., A.B.
Reynolds, Vivian Gordon	Grafton	Fr., A.B.
Rhodes, Walter Sturgis	Point Marion, Pa.	Fr., B.S.Agr.
Rice, Harold Alston (c)	Berkeley Springs	Soph.,A.B.
Richards, John Robert (c)	Fairmont	Soph., B.S.E.E.
Richards, Margaret Dickey	Fairmont	Soph., A.B.
*Richards, Thomas Russell (c)	Richwood	Fr., B.S.Agr.

Riddle, Gladys Waters	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1912.		
Riddle, Hugh Dillard (c)	Davis	Soph., A.B.
Riddle, Walter (c)	Morgantown	Sen., A.B.
Rider, Alfred Morrison (c)	Sutton	Fr., A.B.
Rife, Ralph Edgar (c)	St. Marys	Fr., B.S.Agr.
Riffle, George Newcomer	McClellandtown, Pa.	Fr., A.B.
Riggle, Donald Lachlan (c)	Middlebourne	Fr., A.B.
Riggle, John James	Middlebourne	Sen., B.S.Agr.
Riggle, Lydia Amy	Middlebourne	Sen., A.B.
Riggs, Cecil Orval (c)	Moundsville	Soph., A.B.
Riggs, Charles Venton (c)	Fairmont	Fr., B.S.C.E.
Riggs, Howard Charles (c)	St. Marys	Jun., A.B.
Riggs, Isaac Larkin (c)	Morgantown	Fr., B.S.M.E.
Riggs, Lawrence Cullen	Morgantown	Soph., B.S.Agr.
Ringer, Lestie Ray	Albright	Grad., A. & S.
A.B. West Virginia University, 1916.		
Ringer, Mary Jane	Terra Alta	Soph., A.B.
Rizzo, Anthony Carl	Clarksburg	Special Phar.
Roberts, Margaret Clara	Morgantown	Fr., A.B.
Roberts, Marguerite Ellen	Morgantown	Jun., A.B.
Robinson, Delbert Thomas	Grafton	Special Law
A.B. West Virginia University, 1903.		
Robinson, Ethel Board	Morgantown	Fr., A.B.
Robinson, Harold Lee, Jr.	Uniontown, Pa.	Sen., B.S.C.E.
Robinson J French	Morgantown	Grad., C.E.
B.S.C.E. West Virginia University, 1915.		
Robinson, Lorlin Burl (c)	Elkins	Fr., B.S.C.E.
*Robinson, Philip Ernest	Morgantown	Fr., B.S.Agr.
Roby, Clarence (c)	Petersburg	Soph., A.B.
Rockenbaugh, Cora Adelle	Harpers Ferry	Fr., A.B.
Rodgers, Ira Errett (c)	Bethany	Fr., A.B.
Rohr, Cecil Rex (c)	Alum Bridge	Special Phar.
Rohr, Harley Downton	Alum Bridge	Sen., B.S.Agr.
Rokos, Marcalus Matthew	Morgantown	Jun., B.S.M.E.
Rollings, Harry West, Jr. (c)	Lost City	Fr., A.B.
*Rollins, Jennings Francis	Cornwallis	Fr., B.S.E.E.
Romesburg, Charles Koontz	Clifton Mills	Fr., A.B.
Romesburg, Robert Presley	Clifton Mills	Fr., A.B.
Ropp, Clarence Daniel Luther (c)	Martinsburg	Fr., A.B.
Ross, Ethel Gertrude	Hedgesville	Jun., A.B.
Ross, Hazel Brown	Morgantown	Sen., A.B.
Roush, George Harold (c)	Fairmont	Fr., A.B.
Rowley, Homer King (c)	Shinnston	Soph., B.S.Agr.
*Royce, Paul (c)	Cleveland, Ohio	Fr., B.S.Chm.E.
Ruddell, Charles Stephen (c)	Parkersburg	Fr., B.S.E.E.
Rumsey, Neal Obeth (c)	Morgantown	Fr., A.B.
Ryan, John Thomas	Piedmont	Special Eng'g.
Sanborn, Paul Hugo (c)	Huntington	Fr., B.S.C.E.
Sanders, Carlton Custer (c)	Philippi	Jun., A.B.
*Sanders, Joseph McDonald (c)	Bluefield	Fr., A.B.
Sarle, Charles Faye	Morgantown	Grad. Agr.
B.S. Cornell University, 1916.		
Satterfield, Russell Layman	Morgantown	Sen., A.B.

Savage, James Allen (c)	Charleston	Sen., A.B.
Savage, Virginia	Charleston	Fr., A.B.
Sayre, Floyd McKinley (c)	Ripley	Soph., A.B.
Sayre, Greek	Morgantown	Jun., A.B.
Scally, Thomas Anthony	New Martinsville	Fr., B.S.Agr.
Scarnecchia, Anthony	Benwood	1st. Yr. Phar.
Schaffner, Christopher Nelson(c)	Clarksburg	Fr., B.S.E.E.
Schaffner, Edward Thomas, (3)	Echo Point, Wheeling	Fr., A.B.
Scherr, William Burkhardt (c)	Morgantown	1st. Yr. Med.
Schofield, Thomas Johnson (c)	Wheeling	Fr., B.S.M.E.
Schultz, Dorothy Newell	Morgantown	Special A. & S.
Schultz, Valerie Elizabeth	Morgantown	Jun., A.B.
Scott, Elizabeth Majel	Charleston	Fr., A.B.
Scott, Grace Elinore	Morgantown	Fr., A.B.
Scott, Kathryn Virginia	Charleston	Fr., B.S. in H.E.
Scott, Mary Bernice	Morgantown	Soph., A.B.
*Semple, Robert Walton	Titusville, Pa.	Fr., B.S.E.E.
Semple, Samuel Merrick	Morgantown	Soph., A.B.
*Settle, Nina Forest	Charleston	Fr., A.B.
Shaffer, Harry Morse (c)	Washington, D. C.	Fr., A.B.
Shaffer, James Harvey	Newburg	Soph., B.S.Agr.
Shaw, Victor Hugo (c)	Fairmont	Fr., A.B.
Shawver, Marvin Ross	Divide	Fr., A.B.
Sheets, David Finney (c)	Huntington	1st. Yr. Law
Sheets, Goldie Dale	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1911.		
Sheets, Gwendolyn Grace	Morgantown	Sen., A.B.
Sheppard, Andrew Jonathan (c)	Walton	Fr., B.S.M.E.
Sheppard, Bessie Gay	Walton	Sen., A.B.
Shewey, Ernest Merle (c)	Charleston	Special Phar.
Showman, Frank Warrick	Connellsville, Pa.	Jun., B.S.Agr.
Shriver, Allie Pauline	Morgantown	Soph., A.B.
Shriver, Verella May	Morgantown	Sen., A.B.
Shughrou, James Leo (c)	Ronceverte	Jun., B.S.C.E.
Shughrou, Nell	Ronceverte	Fr., A.B.
Shunk, John Heber Gerhardt (c)	Morgantown	Sen., A.B.
Shurtleff, Mary Demaree McCulloch	Morgantown	Soph., A.B.
Shurtleff, Oliver	Morgantown	Jun., A.B.
Shuttleworth, Charles James (c)	Clarksburg	Fr., A.B.
Shuttleworth, Wayne Stacy (c)	Fairmont	Soph., A.B.
Sigler, Curtis Maxwell (c)	Piedmont	Fr., B.S.M.E.
Simpson, William Elbert	West Union	Soph., B.S.Agr.
Sisler, James Donald (c)	Morgantown	Soph., A.B.
Sisler, Wade Horton	Sun	B.S. 1 Yr. Med.
Slack, Gilbert Lee (c)	Huntington	Special Eng'g.
Slifkin, David Jacob (c)	Bluefield	Fr., A.B.
Slifkin, Samuel Isaac (c)	Bluefield	1st. Yr. Phar.
Smenner, Bessie	Columbus, Ga.	Soph., B.S. in H.E.
Smith, Blaine	Middlebourne	Fr., A.B.
Smith, Carl William (c)	Princeton	2nd. Yr. Med.
*Smith, Charles Gray (c)	Davis	Fr., B.S.C.E.
*Smith, Charles Ray	West Union	Fr., A.B.
Smith, Clara Mary	Mannington	Soph., A.B.
Smith, Constance Heiskell	Ronceverte	Sen., A.B.

Smith, Earle James (c)	Clarksburg	Special Phar.
Smith, Emma Iona	Morgantown	Special A. & S.
Smith, Georgina	Morgantown	Fr., A.B.
Smith, Hosea Alexander (c)	Cowen	Fr., B.S.Agr.
*Smith, Howard (c)	Grafton	Fr., B.S.Agr.
Smith, James Clyde	Morgantown	Special Agr.
Smith, James Garfield	Morgantown	Special Agr.
Smith, Leola May	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1912.		
Smith, Leon Reginald	Morgantown	Fr., A.B.
Smith, Rose Gertrude	Morgantown	Soph., A.B.
*Smith, Ruth Kathrine	Cowen	Fr., A.B.
Smith, Vernon Bonnyfield (c)	Morgantown	Fr., B.S.C.E.
Snaith, Theresa Ora	Weston	Fr., A.B.
Snarr, Otto Welton	Romney	Sen., A.B.
Snarr, Wardney Courtland (c)	Rock Oak	Soph., A.B.
Snedeker, Will Leroy (c)	Wheeling	Soph., A.B.
Snider, Clifford Raymond	Morgantown	3rd. Yr. Law.
A.B. West Virginia University, 1914.		
*Snider, Lewis Howard (c)	Wheeling	Fr., A.B.
Snodgrass, Charles Edwin (c)	Mannington	Fr., A.B.
*Snyder, Oscar Lee	Levels	Fr., A.B.
Sommer, Paul Harrison (c)	Sutton	Fr., B.S.E.E.
Soto, Manuel	Fajardo, P. R.	Soph., A.B.
Souders, Mabel Burris	Clarksburg	Fr., A.B.
Speare, Wilma Carrie	West Liberty	Sen., A.B.
Sprecher, Chas. Stuart Edward (c)	Martinsburg	Fr., B.S.E.M.
Springer, Albert Gail (c)	Blacksville	Jun., B.S.Agr.
Stahler, Otto Raymond	Fort Plain, N. Y.	Fr., Chem. Eng.
Stanley, George Coleman	St. Marys	Fr., A.B.
*Steadman, Kinney Curtis (c)	New Cumberland	Fr., B.S.E.E.
Steadman, William Frederick	New Cumberland	Soph., B.S.E.E.
Stealey, Harriet	Clarksburg	Jun., A.B.
Steele, Francis Willard	Morgantown	2nd. Yr. Law
Steere, Grace Eleanor	Grape Island	Fr., A.B.
Steere, Mabel Virginia	Grape Island	Fr., A.B.
Stemple, Isabel	Amboy	Soph., A.B.
Stemple, Jay Ferry	Amboy	Grad., A. & S.
A.B. Roanoke College.		
Stewart, Merrie Marguerite	Morgantown	Fr.,A.B.
Stillwagon, Emerson	Connellsville, Pa.	Soph., B.S.C.E.
Stockert, Ida Clay	Burnsville	Soph., B.S. in H.E.
Stokes, Julius Boniman	Hall	1st. Yr. Med.
Stoker, Ralph Jennings (c)	Morgantown	Fr., B.S.E.E.
Stone, Arthur Guy (c)	Pinchton	2nd. Yr. Law
Stone, Erwin Bowman (c)	Morgantown	Soph., A.B.
Stone, Louis Earl	Pikeville, Ky.	Soph., B.S.E.E.
Stoops, Lowry McElvaine	Benwood	Sen., A.B.
Stout, Benjamin Mortimore	Clarksburg	Soph., A.B.
Stout, Malden Dallas (c)	Clarksburg	Fr., A.B.
Strobel, Christine	Wheeling	Fr., A.B.
Strother, Claude	Lost Creek	Soph., A.B.
Stubbs, Francis Horatio, Jr., (c)	Morgantown	Soph., B.S.C.E.
Stump, Goldie June	Sutton	Fr., A.B.

Sturgis, William Joseph (c)	Morgantown	Jun., B.S.Agr.
Sturgiss, Helen Gould	Morgantown	Soph., A.B.
Sturm, Gail (c)	Enterprise	Fr., A.B.
*Suter, Charles Ames (c)	Piedmont	Fr., A.B.
Swiger, Rual Bower (c)	Fairmont	Soph., B.S.C.E.
Sydenstricker, Cora Amelia	Morgantown	Fr., A.B.
Sydenstricker, Lawrence Elbert	Morgantown	Sen., B.S.M.E.
Talbott, James Paul	Fairmont	Jun., A.B.
Talbott, Richard Bosworth (c)	Elkins	Soph., A.B.
*Talbott, Robert Matthew, Jr. (c)	Fairmont	Fr., A.B.
Tavenner, George Warth, Jr.	Parkersburg	Sen., A.B.
Taylor, Elizabeth Jackson	Elkins	Fr., A.B.
Taylor, Leslie Owen	Weston	Sen., A.B.
Templeton, Howard Johnston (c)	White Sulphur Spgs.	Jun., A.B.
Theiss, John Otto (c)	Ravenwood	Fr.,A.B.
Thomas, Frederick Lionel	Charleston	3rd. Yr. Law
Thomasson, William Major (c)	Hinton	Fr., B.S.E.E.
Thompson, Della Maree	Middlebourne	Fr., A.B.
Thompson, Guy Paul (c)	Berkeley Springs	Fr., A.B.
Thompson, Herbert Hudson (c)	Spencer	Soph., B.S.Agr.
Thompson, James	Morgantown	B.S., 2 Yr. Med.
Thompson, Marie	Morgantown	Fr., A.B.
Thorn, Merrill Hall (c)	Princeton	Jun., B.S.E.E.
Thornburg, Charles Irving (c)	Huntington	Soph., A.B.
Thornton, Clark Monroe (c)	Princeton	1st. Yr. Law
*Thornton, Ray Spencer (c)	Princeton	Fr., B.S.Agr.
*Tibbets, Virginia Elizabeth	Keyser	Fr., A.B.
Tickle, Katherine Elizabeth	Bluefield	Jun., A.B
Tierney, Genevieve	Weston	Soph., A.B.
Tierney, James Paul (c)	Clarksburg	1st. Yr. Law
*Timberlake, Reginald Warner (c)	Jodie	Fr., A.B.
Toler, Buren Harrison (c)	Sun Hill	Fr., A.B.
Toler, John Harrison (c)	Sun Hill	Jun., B.S.Agr.
Tombaugh, Frances Winifred	Scenery Hill, Pa.	Fr., A.B.
Traubert, Anna Elizabeth	Wellsburg	Jun., A.B.
Travis, Ella Marjorie	Point Marion, Pa.	Fr., A.B.
Trimble, Samuel Alpha (c)	Wheeling	Jun., B.S.Agr.
Trippett, Goldie Mae	Little Falls	Fr., B.S. in H.E.
Trotter, Lorentz Steele (c)	Morgantown	Jun., A.B.
Trump, Charles Samuel (c)	Martinsburg	2nd. Yr. Law
Trump, Frank Myers (c)	Martinsburg	Jun., B.S.
Tucker, Eldon Bryant (c)	Cassville	Soph., A.B.
Tucker, Mary Esther	Cassville	Sen., A.B.
Tuckwiller, Rachel	Lewisburg	Fr., A.B.
Turley, William Campbell	Logan	2nd. Yr. Law
Turner, Bird Margaret	Moundsville	Grad., A. & S.
A.B. West Virginia University, 1915.		
Turner, Dale Gibson (c)	Mannington	Fr., B.S.C.E.
Turner, Francis Wheeler (c)	St. Albans	Soph., A.B.
Twyford, Mayme Lucinda	West Union	Fr., B.S.Agr.
Twyman, Russell Heavener (c)	Clarksburg	Fr., B.S.M.E.
Underwood, Clarence Lazear (c)	Moundsville	Jun., B.S.Agr.
Underwood, Claude Ray (c)	Lost Creek	Soph., B.S.Agr.

Underwood, John Harold (c)	Lost Creek	1st. Yr. Med.
Unkefer, Frederick Doyle	Charlotte, N. C.	Sen., B.S.C.E.
Valentine, Arthur Jay, Jr. (c)	Parsons	Fr., A.B.
Van Camp, Clifford Loring (c)	Paden City	Jun., A.B.
Vance, Walter	Roaring	Sen., A.B.
*Vandegrift, Frank Bane (c)	Ridgeley	Fr., A.B.
*Vandervort, Mary Adaline	Morgantown	Fr., B.S. in H.E.
Vangilder, Russell Dwight (c)	Morgantown	Soph., A.B.
Vannoy, Isabelle Jane	Sistersville	Soph., A.B.
*VanRennen, Albert Cecil (c)	Onoto	Fr., A.B.
VanValey, Carlos Lyle (c)	St. Marys	Fr., A.B.
VanVoorhis, Isaac Lindsay, (c)	Vanvoorhis	Jun., B.S.Agr.
Vassar, James Alfred (c)	Weston	Soph., A.B.
*Vaughan, Edwin Owen (c)	Willow Bend	Fr., A.B.
Vierheller, Albert Frank (c)	Parkersburg	Jun., B.S.Agr.
*VonPreissig, Mitchell James (c)	Alpena	Fr., A.B
Walker, Annie Watkins	Winona	Special A. & S.
Walker, Clara Garten	Charleston	Soph., A.B.
Walker, Henry Streit (c)	Winona	Jun., A.B.
Walker, Riford Bond (c)	Williamson	Fr., B.S.E.E.
Walker, Silas	Reedy	Fr., A.B.
Walls, Hoy Jay (c)	Morgantown	Fr., B.S.E.E.
Walsh, Avis Congdon	Terra Alta	Fr., A.B
Walters, William Walter	Clarksburg	1st. Yr. Law
Ward, Raymond Watson (c)	Connellsville, Pa.	Jun., B.S.M.E.
Warden, Paul Pelley	Grafton	B.S., 2 Yr. Med.
Ware, Dorothy Irving	Shepherdstown	Fr., A.B.
Walters, John Robert, Jr.	Moundsville	Soph., A.B.
*Watkins, Robert Olin (c)	Hoult	Fr., A.B.
Weakley, Charles Edward ,Jr.	Morgantown	Special A. & S.
Weaver, James Plummer	Morgantown	Grad., A. & S.
B.S. West Virginia University, 1916.		
Weaver, Sabina Olive	Morgantown	Grad., A. & S.
A.B. West Virginia University, 1916.		
Webster, John Burns (c)	Scio, Ohio	Soph., A.B.
Weimer, Bernal Robinson	Port Royal, Pa.	Grad., A. & S.
A.B. West Virginia University, 1916.		
Weimer, George Cecil (c)	Port Royal, Pa.	Fr., A.B.
Welch, Iva Mae	Terra Alta	Sen., A.B.
Wellen, Clyde William (c)	Morgantown	Jun., A.B.
Wells, Ben Manuel (c)	Parkersburg	Soph., B.S.Agr.
Wells, Ernest Blaine	Morgantown	Sen., B.S.Agr.
Wells, Howard Leslie (c)	Keyser	Fr., B.S.E.E.
*Wells, Verna Lillian	Morgantown	1st. Yr. Phar.
Welton, William Archibald (c)	Petersburg	Fr., A.B.
Wentling, Ruth	Paw Paw	Fr., B.S. in H.E.
Whaley, Ellis Burton	Finch	Jun., A.B.
White, Ada Miriam	Grafton	Soph., A.B.
White, Hattie Jane	Morgantown	Special A. & S.
White, Mary Jane	Morgantown	Jun., A.B.
White, Orville (c)	Kingwood	Fr., B.S.Agr.
White, Robert Patton (c)	Clarksburg	Soph., B.S.C.E.
Whiting, Hunter	Glenville	Grad., A. & S.

A.B. West Virginia University, 1913.		
Whitten, Lynda	Huntington	Soph., A.B.
Wiest, Paul Foreman	Rippon	Fr., A.B.
Wiestling, Helen Merwin	Wheeling	Grad., A. & S.
A.B. West Virginia University, 1911.		
Wilkinson, Ernest Eugene	Logan	Fr., A.B.
Wiles, Ethel Latitia	Tunnelton	Fr., A.B.
Williams, Frances Ewart	New Martinsville	Sen., A.B.
*Williams, Lena Pearl	Bridgeport	Fr., A.B.
Williams, Mary Elizabeth	Moundsville	Fr., A.B.
Williams, Veva Thelma	Wilsonburg	Fr., A.B.
Williams, James William (c)	Morgantown	Soph., B.S.M.E.
Williamson, John Stewart (c)	New Cumberland	Jun., B.S.M.E.
Williamson, Raymond Randolph (c)	Friendly	Fr., B.S.C.E.
Willison, Dorothy	Cumberland, Md.	Soph., A.B.
Wilmoth, Russell Woods	Elkins	Jun., B.S.E.M.
Wilson, Andrew Aubrey (c)	Morgantown	Fr., A.B.
Wilson, Chape	Morgantown	Soph., A.B.
Wilson, Charles Vinyard	Lewisburg	Soph., B.S.Agr.
Wilson, Guy Cecil	Spencer	Jun., A.B.
Wilson, Harold Franklin (c)	Bluefield	Soph., B.S.E.E.
Wilson, Herman Evans (c)	Grafton	Jun., A.B.
Wilson, Minter Lowther	Cairo	Jun., A.B.
*Wilson, Orris Raymond	Kingwood	Fr., B.S.E.E.
Wilson, Paul Preston	Huntington	Sen., A.B.
Wilson, Wade Inskeep (c)	Davis	Fr., A.B.
Wilson, William Hart (c)	Elkins	Fr., B.S.Agr.
Wilt, Twila Dale	Davis	Fr., A.B.
Winkler, Rudolph (c)	Charleston	Soph., B.S.Agr.
Winter, Alden Raymond (c)	Bridgeport	Fr., A.B.
Winters, Ernest Emile (c)	Huntington	2nd. Yr. Law
*Wolford, Grace Louise	Morgantown	Fr., B.S. in H.E.
Wood, Austin Vorbes	Wheeling	2nd. Yr. Law
A.B. Ohio University, 1915.		
Wooddell, Earl McKinley (c)	Weston	Soph., B.S.C.E.
Woodley, John Pool	Core	Grad., A. & S.
B.A. University of Oregon, 1907.		
Woodyard, Edward Douglass	Spencer	Jun., A.B.
Woodyard, William (c)	Spencer	Fr., A.B.
Wright, Ivan	Lawford	Sen., B.S.Agr.
Wright, Mattie Ellen	Uniontown, Pa.	Sen., A.B.
*Wright, Robert Oney (c)	Barboursville	Fr., B.S.C.E.
Wyckoff, Paul Revere	Grafton	1st. Yr. Law
Yoho, Eula Lee	Moundsville	Jun., A.B.
*Yokum, Humboldt Baker	Beverly	Fr., A.B.
Young, Charles Ross (c)	New Martinsville	Soph., A.B.
Young, McClellan Campbelle (c)	New Hope	Fr., A.B.
Zearley, Joy	Morgantown	Soph., A.B.

STUDENTS ENROLLED IN THE SCHOOLS.

Aaron, Sara	Bluefield	Summer School
Abbott, John Vernon	Fairmont	Music
Adams, Donald	Cheat Haven, Pa.	Summer School
Akers, Wade Virgil	Cucumber	Summer School
Albright, Erbie Claire	Morgantown	Music
Alderson, Jennette Hamilton	Summersville	Summer School
Ammons, Nella Opal	Mannington	Summer School
Anderson, Lillie	Jacksonburg	Summer School
Arbuckle, Alma Janet	Glenville	Summer School
Archer, James Willard	Ravenswood	Summer School
Armontrout, George Washington	Cannelton	Summer School
Armstrong, Mabelle Gladys Harmon	Alaska	Music
Arnett, Margaret Dessie	Morgantown	Music
Atkinson, Jessie	New Martinsville	Summer School
Baer, Andrew Jackson	Morgantown	Summer School
Baer, Mergie	Morgantown	Summer School
Bailey, Dallas Carr	Glenville	Summer School
Bailey, Manta	Buckhannon	Summer School
Baker, Marguerite	Morgantown	Music
Ball, Nada Katherine	Wheeling	Summer School
Balwanz, Paul	Pine Grove	Summer School
Bane, Amanda Jack	Falling Waters	Summer School
Bardall, Mary Elizabeth	Moundsville	Summer School
Barker, Mildred Joy	Morgantown	Summer School
Barker, Nelle Virginia	Morgantown	Summer School
Barrett, Mary Jo	Cameron	Night Class
Bartlett, Esther	Philippi	Summer School
Barlett, Ethel Jemima	Bridgeport	Summer School
Bartlett, Forrest E.	Philippi	Agr. Short Course
Batson, Clarence Orval	Jacksonburg	Summer School
Batten, Beryl	Morgantown	Music
Bayles, Olive	Fairchance, Pa.	Summer School
Beamer, Edna Lee	Monitor	Summer School
Beavers, Jessie	Grafton	Music
Beck, Gladys Geneva	Morgantown	Summer School
Bell, Emma Marguerite	Brownfield, Pa.	Summer School
Bent, Leone Capinola	Beverly	Summer School
Berry, Dorothy Belt	Martinsburg	Summer School
Berry, Winifred Reynolds	Martinsburg	Summer School
Beswick, Addie Clayetta	Huntington	Summer School
Bierer, Barbara	Morgantown	Summer School
Bishop, Lulu May	Fairmont	Music
Blank, Clara	Eckhart, Md.	Summer School
Blosser, William Elmer	Point Marion, Pa.	Summer School
Bobst, Mary Ellen	Cumberland, Md.	Summer School
Boehm, Frances Louise	Fairmont	Summer School
Bonar, John Stanley	Cameron	Summer School
Bonar, May	Glen Easton	Summer School
Bond, Lydia Palestine	Roanoke	Summer School
Borror, Gertrude	Whitmer	Summer School
Boseley, Bertha Lillian	Gormania	Summer School

Bour, John William	Morgantown	Music
Boyd, Mabel Erving	Rogersville, Tenn.	Music
Brady, Lulu	Junior	Summer School
Brake, Agatha	Harrisville	Summer School
Briggs, Herbert Whittaker	Morgantown	Music
Briggs, Marion Ellis	Morgantown	Music
Brill, Ruth Ann	Intermont	Summer School
Britton, Alice	Revel	Summer School
Brock, Eleanor	Morgantown	Music
Brown, Helen Marion	Philippi	Summer School
Bruce, Lottie Bell	New Martinsville	Summer School
Bryan, Drusilla	New Cumberland	Summer School
Bunch, Margaret	Guyandotte	Summer School
Burchinal, Bertha Ellen	Smithfield, Pa.	Music
Burgess, Lillian Marie	St. Albans	Summer School
Burkhardt, Marie Louise	Morgantown	Summer School
Burnworth, Alma	Piedmont	Summer School
Burton, Bertha Mary	Colliers	Agr. Short Course
Byard, Eleanor	Cameron	Summer School
Byerly, Mary	Greensburg, Pa.	Summer School
Calhoun, Lillian	Franklin	Summer School
Cannon, Merle	Clendenin	Summer School
Carden, Byrna Hortense	Zela	Summer School
Carden, Roscoe H.	Skull Run	Summer School
Carney, Flora Hannah	Given	Summer School
Carson, Irene Austin	Charleston	Summer School
Cassell, Frank Wallace	Cass	Summer School
Cather, Maude Minshall	Morgantown	Music
Chapman, John	Morgantown	Summer School
Chapman, Marie	Spencer	Summer School
Chapman, Mayme Pitman	Morgantown	Summer School
Chapman, Myrtle	Servia	Agr. Short Course
Chenoweth, Kate	Reedy	Summer School
Childress, Sophia	Helen, Pa.	Summer School
Christopher, Bryan	Masontown, Pa.	Summer School
Clark, Mary Hope	Falmouth, Ky.	Summer School
Clark, Mary Matilda	Naugatuck	Summer School
Clarke, Muriel	Morgantown	Music
Clark, Stanley Jenkins	Hudson	Summer School
Clay, Lida Pearl	Beckley	Summer School
Clay, Lura	Beckley	Summer School
Cobun, Adah Prudence	Kingwood	Night Class
Coffman, Lillian	Lewisburg	Summer School
Cogar, Lillian Lee	Webster Springs	Music
Cole, Alice Marie	Grafton	Summer School
Colebank, Opal	Sutton	Night Class
Coleman, Cranfill Clyde	St. Albans	Agr. Short Course
Conn, Kathryn	Smithfield, Pa.	Summer School
Connell, Anna Tennerson	Fort Spring	Summer School
Connelly, Ollie	Jacksonburg	Summer School
Cooper, Marvin	Sand Fork	Summer School
Core, Helen	Cassville	Summer School
Corrothers, Brady	Catawba	Summer School
Cosgray, William Ross	Allister	Summer School

Cosner, Leslie Ray	Copen	Summer School
Coughlin, Helen Marie	Morgantown	Summer School
Coulson, May Angie	Morgantown	Music
Courtney, Wilma Marie	Morgantown	Music
Cowell, Blanche	Wadestown	Summer School
Cox, Margaret Elizabeth	Morgantown	Music
Craig, John L.	Cassville	Summer School
Crane, Dee Sprague	Oak Hill	Agr. Short Course
Crickenberger, Laura	Lewisburg	Summer School
Crow, Kenneth Lee	Moundsville	Agr. Short Course
Crowl, Helen Josephine	Fairmont	Music
Cummings, Regina Louise	Weston	Music
Cunningham, George William	Elkins	Summer School
Cunningham, Verna	Ohiopyle, Pa.	Summer School
Currence, Velma Belle	Elkins	Summer School
Curry, Bertha	Hanlin Station, Pa.	Summer School
Dalinsky, Anna Ida	Morgantown	Summer School
Dalrymple, Edith Estelle	Steubenville, Ohio	Summer School
Daniel, Dovie Belle	Welch	Summer School
Davis, Courtland VanHorn	Salem	Summer School
Davis, Eleanor Josephine	Morgantown	Music
Davis, Ivie VanHorn	Salem	Summer School
Davisson, Floris	Lost Creek	Summer School
Dawkins, Nolia	Sandyville	Summer School
Dawkins, Ruth	Sandyville	Summer School
Dean, Miles Elton	Bluefield	Summer School
Debrocq, Georgette	Point Marion, Pa.	Music
Deem, Nora Adeline	Mineral Wells	Agr. Short Course
DeWitte, Blanche	Midway, Pa.	Summer School
Dieckhoff, Martha Caroline	Wheeling	Summer School
Dilcher, Kathryn Elizabeth	Charleston	Summer School
Dille, Lucie Beltzhoover	Morgantown	Music
Dille, Mary Ethel	Morgantown	Music
Dills, Harry Crow	Smithfield, Pa.	Summer School
Dodrill, R. Moore	Berwind	Summer School
Dorsey, Mary	Clendenin	Summer School
Dorsey, Rufus Urban	Mt. Lookout	Summer School
Dovey, Hannah Duff	Morgantown	Summer School
Duckwall, Margaret Mooman	Berkeley Springs	Summer School
Dunbar, Harvey Roldan	Parkersburg	Summer School
Duncan, Clarice Rae	Charleston	Summer School
Durstine, Mary	Mt. Pleasant, Pa.	Summer School
Duthie, Grace Irene	Clarksburg	Summer School
Eakin, Armstrong	Morgantown	Music
Earle, Mae	Elkhorn	Summer School
Eberhart, Mary	New Geneva	Summer School
Eddy, Charles Ross	Hagans	Summer School
Eddy, Esta Kathryn	Fairview	Summer School
Edwards, Martha Goudge	Welch	Summer School
Erwin, Dana Robert	Elkins	Summer School
Evans, Bonnie Pearl	Folsom	Summer School
Evans, Charles Marion	Mount Morris, Pa.	Summer School

Evans, Hiram	Morgantown	Summer School
Evans, Kenneth	Point Marion, Pa.	Summer School
Evans, Mary	Grafton	Summer School
Evans, Walter Lyle	Morgantown	Summer School
Everly, Nell	Kingwood	Summer School
Fagert, Flossie	Paden City	Summer School
Fankhauser, Lloyd Frederick	New England	Summer School
Fankhauser, Thomas Edwin	Wheeling	Summer School
Farmer, Mollie Hume	Beckley	Summer School
Fast, Josephine Elizabeth	Ravenswood	Music
Fast, Mary Sandusky	New Geneva, Pa.	Summer School
Fawcett, Grace Fay	Morgantown	Music
Feiss, Blanche Esta	Reader	Summer School
Ferguson, Archie Dean	Holliday's Cove	Summer School
Field, Edna Cynthia	Morgantown	Summer School
Fisher, Delphia	Charleston	Summer School
Fisher, Ruby Hazel	Glenville	Summer School
Fisher, William Ashley	Morgantown	Summer School
Fling, Fay	Morgantown	Music
Fockler, Arnett	Persinger	Summer School
Folk, Daniel Hagon	Martinsburg	Agr. Short Course
Fonner, James Thurman	Middlebourne	Summer School
Foreman, Nevil Lee	Shepherdstown	Agr. Short Course
Francis, Ethelyn	Smithfield	Summer School
Franklin, John Blaine	Belleville	Summer School
Frantz, Edwina	Tunnelton	Summer School
Frantz, Nell Muriel	Tunnelton	Summer School
Freeland, Pearle	Terra Alta	Summer School
Fulton, Elbert Martin	Danville	Summer School
Gall, Dessie Dove	Belington	Summer School
Gapen, Margaretta	Jefferson, Pa.	Night Class
Garrett, Annie Mae	Princeton	Summer School
Gatewood, Ellen Gertrude	Charleston	Summer School
George, Blanche	Buffalo	Summer School
Gibson, Isa	Albright	Summer School
Gibson, Meliss	Dawson	Summer School
Gibson, Ruth Carson	Charleston	Summer School
Gilmore, Mary Kathalene	Charleston	Summer School
Given, Ida Susan	Sutton	Summer School
Glover, Peter Luther	Morgantown	Summer School
Gneiser, Hattie Violet	Morgantown	Summer School
Gorman, James G	Morgantown	Summer School
Green, Gertrude	Morgantown	Music
Gregory, Alfred Fleming	Webster Springs	Summer School
Grey, Mary Virginia	Zela	Summer School
Griffith, Mabel Marie	Morgantown	Music
*Groves, Andrew Harrison	Ophelia	Summer School
Groves, Hattie	Summersville	Summer School
Groves, Huling	Canvas	Summer School
Groves, Maude	Deepwell	Summer School
Hackney, Lillian Grey	Morgantown	Music
Haddox, Kathryn Maxwell	Huntington	Summer School
Hagan, Fietta Matilda	Hero, Pa.	Music

*Deceased, July, 1916.

Hagedorn, Mildred Mae	Dellslow	Summer School
Hager, Ruth Agnes	New Geneva, Pa.	Music
Hagerty, Mary Elizabeth	Charleston	Summer School
Haines, Elmer Lee	Slanesville	Summer School
Hall, Gladys	Welch	Summer School
Hall, Hattie Rebecca	Fairview	Summer School
Hamilton, Dessie Mae	Wick	Summer School
Hamilton, Florence	Grafton	Summer School
Hamrick, Viola Rebekah	Ralph	Summer School
Hamstead, Mary Ethel	Eglon	Summer School
Hamstead, Peter Ellis	Eglon	Summer School
Hansford, Maude	Waterford, Ohio	Summer School
Hardy, Edith Lucretia	Morgantown	Music
Harper, Howard	Charleston	Summer School
Harper, John E.	Spencer	Summer School
Harris, Virgie	Elkins	Summer School
Harrison, Louise	Martinsburg	Summer School
Harrison, Theta	Morgantown	Night Class
Hart, Louella Florence	Tunnelton	Summer School
Hartley, Eva Dale	Fairmont	Music
Hartman, Fleet Austin	Glenville	Summer School
Hartman, Guy Nelson	Chambersburg, Pa.	Summer School
Harvey, Agnes	Shaft, Md.	Summer School
Hastings, Kate	Cheat Haven, Pa.	Summer School
Hastings, Lynn	Morgantown	Summer School
Hathaway, Mildred Beatrice	Burlington	Music
Headley, Ross Morris	Mt. Morris, Pa.	Summer School
Heck, Alberta	Barboursville	Summer School
Hedges, Thurman	Short Creek	Summer School
Heiskell, Pauline Johnston	Morgantown	Music
Herscher, Elizabeth Kathleen	Charleston	Summer School
Hersey, Rexford Brammer	Guyandotte	Music
Hertzog, William Clyde	Shinnston	Summer School
Hewes, Mary Elizabeth	Wheeling	Summer School
Hewitt, Virginia Clotele	Mannington	Music
Hibbs, Mary Effie	Independence	Agr. Short Course
Higgins, Jane Mabel	Morgantown	Music
Highberger, Nellie	Vanvoorhis	Summer School
Hileman, Julia Myrtle	Frostburg, Md.	Summer School
Hill, Blanche Ferguson	Holliday's Cove	Summer School
Hill, Lizzie Florence	Morgantown	Summer School
Hill, Orval Price	Cairo	Summer School
Hinkle, Adah Wolverton	Long Run	Summer School
Hoge, Ellen Crayne	Waynesburg	Summer School
Hoge, Mary Rhinehart	Waynesburg	Night Class
Honaker, Mamie	Scarbro	Summer School
Howard, Dan	Clarksburg	Summer School
Hubbs, Elsie	Glen Easton	Summer School
Hubbs, Georgia	Glen Easton	Summer School
Hubbs, George	Glen Easton	Summer School
Hudkins, Mabel Jennet	Morgantown	Summer School
Huffman, Ethel Leola	Morgantown	Summer School
Huffman, Florence Edna	Lowell	Summer School
Hughart, Flossie	Scarbro	Summer School
Hughart, Minnie Lee	Scarbro	Summer School

Hughes, Helen Catherine	Parkersburg	Summer School
Hughes, John Clayborne	Spencer	Summer School
Hughes, Pearl	Fairchance, Pa.	Summer School
Humbert, Eva	Fairchance, Pa.	Summer School
Hume, Andrew Door	Morgantown	Agr. Short Course
Hunter, Erwin	Morgantown	Summer School
Hutchinson, Blanche Cook	Welch	Summer School
Hutson, Herbert Lee	Little Falls	Summer School
Ice, Flora	Farmington	Summer School
Ice, Herschel Blaine	Barracksville	Summer School
Jackson, Lora Deane	Logan	Summer School
Jackson, Mattie	Ronceverte	Summer School
Jackson, Nette Ruth	Ronceverte	Summer School
Jacobs, Grace	Morgantown	Summer School
Jamison, Tida Bailey	Morgantown	Summer School
Jarrett, Mary Evelyn	Charleston	Summer School
Jarvis, Allye Blanche	Weston	Summer School
Jarvis, Benjamin Franklin	Walton	Summer School
Jarvis, Holly	Neba	Summer School
Jenkins, Edna	Fairmont	Summer School
Jenkins, John Omer	Morgantown	Summer School
Jenkins, Joseph	Long Reach	Summer School
Jobes, Jessie	Pullman	Summer School
Johnson, Daisy	Morgantown	Summer School
Johnson, Laura Dale	Morgantown	Night Class
Johnson, Sue Montgomery	Keyser	Summer School
Johnston, Jessie Lee	Morgantown	Music
Johnston, Olive	Bluefield	Summer School
Johnston, Ruth Powell	Bluefield	Summer School
Jones, Alta Flora	Morgantown	Music
Jones, Margaret Elsie	Morgantown	Music
Jordan, Clara Huffman	Huntersville	Summer School
Judy, Lester Anvon	Eglon	Summer School
Junkins, Olive Bielaski	Bayard	Summer School
Keck, Mary Morrison	Morgantown	Music
Keener, Alena	Morgantown	Summer School
Keener, Mabelle Flora	Dunkard, Pa.	Music
Kees, Fanny Virginia	Uffington	Summer School
Keith, Ada	Harrisville	Summer School
Kemp, Mary	Welcome, Md.	Summer School
Dendall, Karl Neener	McClellandtown, Pa.	Summer School
Kiger, Lulu Belle	Elm Grove	Summer School
Kincaid, Mary Hamilton	Frankford	Summer School
King, Blaine	Montcalm	Summer School
Kiser, Mary Ola	Woodstock, Va.	Summer School
Knight, Dena Clare	Fairmont	Summer School
Knowles, Susye Jennings	Staunton, Va.	Music
Kyle, Alberta Virginia	Charleston	Summer School
Lake, Margaret Virginia	Wheeling	Summer School
Lampe, Anna	Jeannette, Pa.	Summer School
LaRue, Margaret Rebecca	Hillsboro	Summer School
Law, Velmah Mary	Lawford	Music

Lazzelle, Cecelia Mabel	Morgantown	Music
Leaman, Clara Jeannette	Fairmont	Summer School
Ledsome, Wilma Pearle	Reedy	Summer School
Lee, Edna Bernice	Junior	Summer School
Leeds, Edith Mae	Fairmont	Summer School
Lester, Paris Pepper	Fort Gay	Summer School
Light, Eleanore	Hedgesville	Summer School
Lipscome, Rosa Glenn	Parsons	Summer School
Lively, James William	Tango	Summer School
Lively, Nora Helen	Tango	Summer School
Locke, Mary	Weston	Summer School
Lowe, Lola	Charleston	Summer School
Luke, Richard Timberlake	Charles Town	Music
Lyeth, Juliet Virginia	Martinsburg	Summer School
Mabey, Alvin Henry	Davenport, N. Y.	Music
Madden, Cecilia Leona	Vegan	Summer School
Malcolm, Mary Josephine	Kenova	Agr. Short Course
Malloy, Marguerite	Rowlesburg	Summer School
Mapel, Mary Victoria	Dunkard, Pa.	Music
Marquess, Iva Dale	Masontown	Music
Marshall, Genevieve Elliott	Morgantown	Music
Martin, Alice Virginia	Parkersburg	Summer School
Martin, Leona Mabel	Morgantown	Summer School
Marvin, Louis Harold	Morgantown	Music
Mathews, Caddie Delancy	Cameron	Summer School
Maury, Mollie	Monterey, Va.	Summer School
Maxwell, George Ralph	Morgantown	Music
McClung, Worth Dix	Richwood	Summer School
McCrea, Alice Esther	New Cumberland	Summer School
McCullough, Ella	Fairchance, Pa.	Summer School
McCutcheon, Georgia	Reedy	Summer School
McDonald, Blanche Katherine	Cowen	Summer School
McDonald, Mary Marguerite	New Cumberland	Summer School
McElhaney, Alice Catherine	Dunbar, Pa.	Summer School
McIntire, Burton	Morgantown	Summer School
McIntire, Madalyn	Morgantown	Music
McKelvy, Rhoda Forester	Wellsburg	Summer School
McMillen, Clara Skales	Moundsville	Music
McMillan, Frank	Masontown	Summer School
McVeigh, Ada Evelyn	Thomas	Summer School
Menear, Edith	Independence	Summer School
Menear, Elya McKinley	Morgantown	Summer School
Menefee, Ida Florence	Keyser	Summer School
Meredith, Cora	Morgantown	Music
Merinar, Elmer Kirkwood	Sherrard	Summer School
Messenger, Metta	Baldwin	Night Class
Meyers, Elizabeth	Lonaconing, Md.	Summer School
Michael, Oliver	Hagans	Summer School
Michael, William Earl	Fairview	Summer School
Miller, Grace	Grafton	Summer School
Miller, Roy Brooks	Morgantown	Music
Miltenberger, Loretto Genevieve	Cumberland, Md.	Summer School
Mollohan, Bertha	Summersville	Summer School
Mollohan, Ethel	Summersville	Summer School

Molton, Harry Antram	McClellandtown, Pa.	Summer School
Monroe, Mary Alice	Spencer	Summer School
Moore, Lilly	Pine Grove	Summer School
Moore, Mary Elizabeth	Keyser	Summer School
Moran, Clarence	Uffington	Summer School
Moran, Edith Grace	Catawba	Music
Morgan, Frank Holmes	Morgantown	Music
Morgan, Gladys Pearl	Mannington	Music
Morgan, Letha Leota	Huttonsville	Summer School
Morgan, Lorena Virginia	Buckhannon	Summer School
Morgan, Vertie Mae	Fairmont	Summer School
Morris Edna Leyman	Morgantown	Music
Morris, Floyd Elten	Pine Grove	Summer School
Morrison, Arphad Paul	Shinnston	Summer School
Musgrove, Winnie	Fairmont	Summer School
Myers, Ivy Lee	Summersville	Summer School
Myers, Rachel	Summersville	Summer School
Neel, Margaret Savina	Lewisburg	Summer School
Nethken, Brooke Kimmel	Morgantown	Summer School
Newman, Ora	Independence	Summer School
Nicholls, Carrie Mathews	Wellsburg	Summer School
Nihion, Kathryn	Martinsburg	Summer School
Noble, Charles Luther	Grindstone, Pa.	Summer School
Oliver, Mary Bertha	Morrison, Ill.	Music
O'Malley, Mary Gladys	Morgantown	Summer School
Orr, Jessie Belle	Lonaconing, Md.	Summer School
Orr, Margaret Patrick	Lonaconing, Md.	Summer School
Orth, Ella	Charleston	Summer School
Otto, Julia Elizabeth	Morgantown	Music
Owens, Mary Elizabeth	Weston	Summer School
Painter, Ocie Katherine	Oak Hill	Agr. Short Course
Parke, Anna	Fairview	Summer School
Parke, Emma	Blacksville	Summer School
Parker, Edith Leonore	Mona	Music
Parker, Vera	Frostburg, Md.	Summer School
Parks, Charles Elmer	Eglon	Summer School
Patterson, Nellie May	Fairmont	Summer School
Peebles, Eloise	Charleston	Summer School
Perdue, Daniel Henry	Welch	Summer School
Perkins, Edna	Princeton	Summer School
Peters, Lula Myrtle	Jeannette, Pa.	Summer School
Peterson, Sylvia Belle	Dellslow	Summer School
Phillips, Holly Otis	Walton	Summer School
Pickenpaugh, Beulah Frank	Morgantown	Music
Platt, Mabel Louise	Coraopolis, Pa.	Summer School
Poling, Columbus Hall	Philippi	Summer School
Posten, Elizabeth	Morgantown	Music
Porter, Frances	Charleston	Summer School
Powell, Nellie Ruth	Frostburg, Md.	Summer School
Pratt, William Albert	Bridgeport	Agr. Short Course
Price, Bertha Zoe	Mannington	Agr. Short Course
Price, Cora Virginia	Fairmont	Agr. Short Course
Price Mary Belle	Morgantown	Music

Price, Mildred Louise	Morgantown	Music
Price, William Leo	Marlinton	Agr. Short Course
Prickett, Evelyn	Montana	Summer School
Prickett, Mary Alcinda	Fairmont	Summer School
Protzman, Edith Venona	Morgantown	Summer School
Queen, Imogene Dickinson	Man	Summer School
Quinet, Yvonne	Masontown, Pa.	Music
Rader, John Haymond	Summersville	Summer School
Rannells, Earl Theodore	Points	Agr. Short Course
Reckard, Carrie May	Clifton Mills	Summer School
Reed, Alice Estelle	Morgantown	Summer School
Reed, Joseph	Morgantown	Summer School
Reed, Mildred Louise	Morgantown	Music
Reeves, Charlotte Dorothea	Baltimore, Md.	Summer School
Reppert, Virginia	Uffington	Summer School
Reynolds, Lottie	Eaton	Summer School
Richardson, Harriet Virginia	Shinnston	Music
Richmond, Margaret	Cumberland, Md.	Summer School
Rider, Nellie Morris	Morgantown	Summer School
Ridgway, Frances Marie	Morgantown	Summer School
Riggs, Louise Schiller	Charleston	Summer School
Robb, John	Waynesburg, Pa.	Summer School
Robbins, Hilma Leone	Washington	Agr. Short Course
Robertson, Henry Clay	Charleston	Summer School
Robertson, Olive Virginia	Charleston	Summer School
Robinson, Libbie Jean	Smithfield, Pa.	Summer School
Robinson, Nellie Gay	Morgantown	Summer School
Robison, Anna Louise	Morgantown	Summer School
Rodefer, Velma	Shadyside, Ohio	Summer School
Rogers, Louise Clemson	Morgantown	Music
Rohrabaugh, John Henry	Belington	Summer School
Rollins, Faye	Cornwallis	Summer School
Rollins, Roy	Crany	Summer School
Ross, Dee Louise	Bridgeport	Music
Rusen, John	Wellsburg	Summer School
Russell, Bennie Watson	Mooresville	Summer School
Sadler, Jennie	Bluefield	Summer School
Samples, Hattie Teckla	Clendenin	Summer School
Sapp, Minnie May	Morgantown	Summer School
Satterfield, Jaye Hope	Fairmont	Summer School
Sayre, Clara	Morgantown	Summer School
Sayre, Dorothy	Morgantown	Summer School
Sayre, Mary	Morgantown	Summer School
Schenck, George	Morgantown	Music
Schnopp, Walter Clinton	Hazelton	Summer School
Scott, Omnipotent Benjamine	Montcalm	Summer School
Seal, Henry Lee	Hudson	Summer School
Shaffer, Ada Foria	Dellslow	Summer School
Shannon, Ida Elizabeth	West Union	Summer School
Shannon, Minnie Rebekah	West Union	Summer School
Shepard, Ada	Griffithsville	Summer School
Sheppard, William Taylor	Smoot	Summer School

Shriver, Idah Mae	Wadestown	Summer School
Sieneawski, Stefan Stanislaw	Albert	Music
Simmons, Jacob Greenleaf	Valley Head	Summer School
Simmons, William Berlin	Bartow	Summer School
Simpson, Opal	Mobley	Summer School
Sims, Ada Adele	Woodlands	Summer School
Sims, Eva	Woodlands	Summer School
Sirota, Rose	Morgantown	Music
Smith, Edith Elizabeth Viole	Uniontown, Pa.	Summer School
Smith, Marguerite Elizabeth	Morgantown	Music
Snider, Elizabeth Blake	Rivesville	Agr. Short Course
Snider, Mildred Jasmine	Spencer	Music
Spadaccio, Alma Marie	Morgantown	Music
Spangler, Dessie Pearl	Coraopolis, Pa.	Summer School
Specht, Samuel King	St. Albans	Summer School
Stansberry, Goldie Alice	Little Falls	Summer School
Steele, Blanche	Helen, Pa.	Summer School
Steele, Ednah Grace	Walker	Summer School
Steele, Eva Belle	Charleston	Summer School
Stenger, Leo Edward	Morgantown	Summer School
Strickler, Mary Willa	Philippi	Summer School
Stump, Wilbur Dale	Charleston	Summer School
Sturm, Edna	Grafton	Summer School
Sturm, Elizabeth Bryan	Enterprise	Music
Stutzman, Ernest	West Milford	Summer School
Summers, Eva Linn	Fairmont	Summer School
Sutherland, Mabel Ina	St. Albans	Agr. Short Course
Sweitzer, Hubert	Morgantown	Music
Sydenstricker, Mary Frances	Hillsboro	Summer School
Taggart, Katherine	Mannington	Summer School
Tarr, Helen Elizabeth	Morgantown	Music
Teets, Mildred Harland	Aurora	Music
Teets, Oda Bee	Aurora	Summer School
Thomas, Ashly Laura	Metz	Summer School
Thomas, Mary Eleanor	Wana	Summer School
Thomas, Olive	Morgantown	Music
Thompson, Evangeline	Fort Gay	Summer School
Thornhill, Lucy Abigail	Lawton	Summer School
Toothman, Homer Clinton	Fairmont	Summer School
Toynbee, Carrie	Morgantown	Music
Tustin, Lloyd Talmage	Hundred	Summer School
Tuttle, Francis Marion	Jackson	Summer School
Twyman, Hattie	Cairo	Summer School
Underwood, Roy	Shirley	Summer School
Vanderhoff, Ada Brown	Tunnelton	Music
Van Horn, Orpha Leonora	Blandville	Summer School
VanMeter, Susie Inskeep	Alaska	Summer School
Vickers, Aletha Kate	Morgantown	Music
Vincent, Fanney	Freeman	Summer School
Wade, Georgia Chorpening	Morgantown	Music
Walker, Elizabeth	Sutton	Music
Wallace, Maynard	Triadelphia	Music

Ward, Elva Mabel	Inez, Ky.	Summer School
Ward, Mary Mae	Spencer	Summer School
Warden, Rhea Watson	Grafton	Music
Ware, Mayme	Huntington	Summer School
Warman, Alice	Morgantown	Summer School
Warman, Altha	Morgantown	Summer School
Weaver, George Sperry	Moundsville	Summer School
Weekly, Lewis Edwin	Moundsville	Agr. Short Course
Weekley, Mary Gannelle	Harrisville	Summer School
Welch, Ethel Dorothea	Hoyes, Md.	Summer School
Wells, Dorsey Earl	Fairview	Summer School
West, Ottie Virginia	Newburg	Summer School
Whetsell, Mabelle Eleanor	Morgantown	Music
White, Annie Laurie	Lewisburg	Night Class
White, Bashaba	St. Albans	Summer School
White, Blanche Clara	New England	Summer School
White, Florence Helen	Grafton	Summer School
White, Olive Luell	Whitmer	Summer School
Whited, Charles Nathaniel	Geneva	Summer School
Wiest, Esther Virginia	Rippon	Summer School
Wilfong, Florence Belle	Fairmont	Summer School
Williams, Harriet	Morgantown	Music
Williams, John Bryan	Corliss	Summer School
Williams, Laura	Matewan	Summer School
Williams, Mary Margaret	Morgantown	Music
Willaims, Nannie Martin	Fairchance, Pa.	Summer School
Williams, Sarah Elvira	Morgantown	Music
Wilmoth, Troy Bell	Elkins	Summer School
Wilson, Elsie	Wheeling	Summer School
Wilson, Grace	Huntington	Summer School
Wilson, Mae	Morgantown	Music
Wilson, Maude Lee	Millwood	Summer School
Wilson, Mary Juanita	Lewisburg	Music
Wood, Poncy J.	Flat Top	Summer School
Woodford, Okey Johnson	Philippi	Summer School
Woodward, Ruby	Beverly	Summer School
Wright, Edna Olevia	Hiorra	Summer School
Wright, Norma Mildred	Keyser	Summer School
Wyly, Thos. Hamilton	Keyser	Summer School
Yates, Helen	Williamsburg	Summer School
Young, Stella May	Charleston	Summer School
Zane, Carrie Caldwell	Wheeling	Summer School
Zinn, Harley Eldridge	Philippi	Agr. Short Course

ENROLLMENT IN EXTENSION AND CORRESPONDENCE COURSES.

(As far as Reported March 1, 1917)

Agricultural Extension Schools	705
Agricultural Extension Correspondence Schools	136
Agricultural Reading Circles	1034
Mining Extension Schools	2076

SUMMARY OF UNIVERSITY ENROLLMENT FOR 1916-17.

(AS FAR AS REPORTED, MARCH 1, 1917).

ENROLLMENT IN THE COLLEGES AND THE SCHOOL OF MEDICINE

	CANDIDATES FOR DEGREES								Special Students			Total		
	Grad.	Sen.	Jun.	Soph.	Fresh.	Men	Women	Total	Men	Women	Total	Men	Women	Total
Arts and Sciences	46	64	76	142	332	387	273	660	10	12	22	397	285	682§
Engineering	2	18	18	36	94	168	0	168	7	0	7	175	0	175
Agriculture	4	24	38	42	71	135	44	179	6	1	7	141	45	186
Law*	0	18	22	20	0	60	0	60	10	0	10	70	0	70
Medicine and Pharmacy*	0	1	18	36	0	52	3	55	11	0	11	63	3	66
Totals	52	141	184	276	497	829	321	1150	44	13	57	846	333	1179

ENROLLMENT IN OTHER DEPARTMENTS AT MORGANTOWN	Men	Wom.	Total
School of Music	15	90	105¶
Summer School (not counted elsewhere)	122	315	437†
Night Class	0	10	10
Winter Short Course in Agriculture	12	11	23
Farmers' Week	651	110	761
Boys' and Girls Prizewinners Course—Agriculture	105	48	153
School of Good Roads	120	0	120
Totals	1025	584	1609
Total Enrollment at Morgantown	1871	917	2788‡

*Students in the College of Law are known as Third-year, Second-year, and First-year Students; in the School of Medicine as Second-year and First-year Students. †The total enrollment in the Summer School, including 361 regular college students and 125 students who subsequently re-enrolled in some other college or school, was 734. ‡Of this total 125 are residents of states other than West Virginia. §Twenty-eight other students were registered for combined courses in two colleges. ¶Six of these students took music in the Summer School only.

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